DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B583022510

FACILITY: AJAX METAL PROCESSING INC.		**SRN / ID:** B5830
LOCATION: 4651 BELLEVUE AVE, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** WAYNE
CONTACT: FRANK BORNO , PRESIDENT		**ACTIVITY DATE:** 07/29/2013
STAFF: Terseer Hemben	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Metal coating - MACT		
RESOLVED COMPLAINTS:		

Inspector: Terseer Hemben (AQD)

Personnel Present: Mr. Dave Krause (General Manager), and Tina Sakalas (Executive Administrator)

Company: Ajax metal processing Inc. AMP, 4651 Bellevue Avenue, Detroit, MI 48207

SRN: B5830; ROP # MI-ROP-B5830-2009a

Date of Inspection: July 29, 2013

Facility Phone Number: 313-267-2100; ext 5012.; 313-267-2104 (Tina)

INSPECTION NARRATIVE

I arrived at the Ajax facility on July 29, 2013, at 1310 hours. The purpose of visit was to conduct annual compliance inspection of the metal processing and coating operation. Temperature at the hour was 65 F with wind speed 6 mph coming from the W. I was admitted into the conference hall by Tina Sakalas. Mr. Dave Krause, joined us for a pre-inspection conference. We went over itemized agenda that was organized for inspection. We discussed the type of records that MDEQ-AQD requested from AMP Inc. The Company indicated all records were electronically filed and so the Company needed time extension to provide those records. Time extension request was verbally granted to August 13, 2013.

Mr. Krause and I proceeded onto the plant for inspection. We inspected all the Emission Units listed in Renewable Operating Permit. Most of the units were down at the time of the inspection. We observed that Ajax Metal processing maintained the use of the permitted processes in running the metal finishing plant. The layout within the facility had been re-organized with reference to previous inspection, and was maintained in a satisfactory manner. We returned to the conference room for post-inspection interview. The records requested by the AQD were sent to the AQD office on August 14, 2013.

COMPLAINT/COMPLIANCE HISTORY:

Ajax Metal processing Company was cited for odor and particular matter (PM) violation in 2002 and was resolved through consent order. The Company has been relieved from the list of EPA risky operating sources in terms of uncontrolled pollution.

OUTSTANDING LOV'S:

None

PROCESS DESCRIPTION:

The Ajax Metal Processing Company operates the following coating lines at the Bellevue Street-Detroit facility: Dip/Spin Paint line, Waste Water Treatment, Zinc Plating, Phosphate line, Chromate Plating, Heat Treatment furnace, Locking and Sealing, and Laboratory analysis. There are numerous plating tanks and solution-holding tanks, solid waste holding bins, and scrubbers associated with each process line. Ajax Metal processing facility offers clean and coat services on metal parts for Companies, such as Ford Motor Company, Daimler Chrysler, and General Motors. The rendered services include applications of both 3M, and Loctite adhesives and sealants. Ajax Metal Processing operates under the ROP# MI-ROP-B5830-2009.

EQUIPMENT AND PROCESS CONTROLS:

Ajax Metal Processing Company provided updated process control equipment in the Scrubber system. The Company's information is filed in the records.

OPERATING SCHEDULE/PRODUCTION RATE:

Ajax Metal processing Inc. operates full three shifts covering 24 hours, through 7 days per week, and 365 days of the year. The Company has 40 employees working at this facility.

APPLICABLE RULES RO Permit# MI-ROP-B5830-2009a CONDITIONS:

The AMP operations were evaluated consistent with the ROP conditions. The following conditions were evaluated:

ROP covering Process and Equipment

1. In compliance - AMP demonstrated there has not been any modification to any system or process at the facility in the last 12 months [Cover page, Item # 1].
   Per FGLOCKSEAL

2. In compliance - AMP demonstrated the amount of VOC emissions from FGLOCKSEAL to the ambient air did not exceed 2000 lbs. per month based on calendar month from each individual coating

line and the purge and clean-up operations associated with the line. [SC I.1]. Records submitted indicated the highest emissions were 1000 lbs. per month based on 12-month rolling period. [Exhibit 2].

3. In compliance –AMP demonstrated the amount of VOC emissions from FGLOCKSEAL to the ambient air did not exceed 10 tpy based on 12 month rolling period as determined at the end of each calendar month from each individual coating line and the purge and clean-up operations associated with the line [SC I.2]. Records submitted by AMP indicated the maximum emission was 0.5 tpy based on 12-month rolling time period [Exhibit 2].

4. In compliance -AMP demonstrated the amount of VOC emissions from FGLOCKSEAL to the ambient air did not exceed 30 tpy based on 12 month rolling period as determined at the end of each calendar month from all coating lines and all associated purge and clean-up operations at the stationary source-including combined emissions from any coating line covered by this permit, any permit issued pursuant to Rule 201, and any coating line exempt from requirement to obtain a permit pursuant to Rule 287 and/or Rule 290 [SC II.1]. Records submitted by AMP indicated the total emissions were 15 tpy [Exhibit 2].

5. In compliance-AMP demonstrated all waste coatings and reducers were captured, stored in closed containers, and disposed of in an acceptable manner in compliance with all applicable rules and regulations [SC III.1]. Response submitted by AMP stated all purge clean-up and production solvents were reused as process (products additives [Cover page item# 5].

6. In compliance – AMP did not need to demonstrate permittee did not operate any spray coating process unless dry filters or a water curtain for particulate control was installed and operated properly [SC IV.1]. AMP did not operate such a process.

7. In compliance-AMP demonstrated the coating application method used in the Emission unit high volume-low pressure (HLVP) spray or equivalent technology with equal or better transfer efficiency. [SC IV.2]. Response received from AMP stated the coating process was flowcoat and dipspin –processes that offered higher efficiency than HLVP [Cover page item# 7].

8. In compliance- AMP demonstrated permittee determined the VOC emissions and VOC content in pounds per gallon of any coating, reducer or purge/clean-up solvent as applied or as received in accordance with 40 CFR Part 60 EPA method 25A or other EPA approved [SC V.1]. Records submitted by AMP indicated manufacturer's formulation was used in to determine VOC content [Exhibit 8-coating summary].

9. In compliance –AMP did not need to demonstrate permittee tested for VOC or emissions content within 60 days of any applicable request [SC V.2]. Records received from AMP stated the process was not applicable to the facility operations [Cover page item# 9].

10. In compliance – AMP did not need to demonstrate, if applicable, test results were submitted to the AQD Supervisor within 60 days following the last date of test results [SC V.3]. The process was not applicable [Cover page item# 10].

11. In compliance –AMP demonstrated the permittee maintained:

(a) monthly record of purchase orders and invoices for all coatings, reducers, and purge/clean-up solvents [SC VI.1a]. Purchase order records were provided [Exhibit# 11a].

(b) monthly record of the VOC content in pounds per gallon of all reducers and purge clean-up solvents, the usage rate in gallons and disposal records [SC VI.1b]. Monthly coating usage, which included reducers and solvents are listed [Exhibit 11b, Q11b].

(c) monthly record of the VOC content in pounds per gallon of each coating and the usage rate in gallons are listed [SC VI.1c]. [Exhibit 11c, Q11b].

(d) monthly and annual VOC emission rate calculations for each coating line in tons per month and tons per 12 month-rolling time period, using the method specified in Appendix 7 or other AQD approved method [SC VI.1d]. Acceptable data is listed [Exhibit 2, Q2].

(e) Annual records based upon a 12-month rolling time period of the actual VOC emission rate in tons per year for all coating lines and associated purge/clean-up operations at the stationary source [SC VI.1e]. Records are listed [Exhibit 2 Q2].

(f) Date and description of any modification or new installation of process or control equipment for the coating line [SC VI.1f]. Response from AMP stated there was no change in coating line process [Cover page item#11f.].

(g) Date and description of any coating change or replacement on the coating line [SC VI.1g]. [Cover page item# 11g indicated in Exhibit 11b Q2 identified months in which new coatings were added].

(h) Current listing of chemical composition of each coating, including the weight the weight percent of each component is presented in [SC VI.1h]. Exhibit 8 Q8].

12. In compliance-AMP demonstrated permittee made prompt reporting of deviations pursuant to Genera conditions 21 and 22 of Part A [SC VII.1]. Response to question stated no deviations required prompt reporting [Cover page item# 12].

13. In compliance –AMP demonstrated permittee submitted semiannual reporting of monitoring and deviations pursuant to General Conditions 23 of Part A; and post marked to reflect compliance with March 15 for reporting period schedules upon request from AQD as applicable [SC VII. 2]. Response from AMP stated semiannual reports were submitted timely [Cover page item# 13]

14. In compliance - AMP demonstrated permittee submitted Annual certification of compliance pursuant to General Conditions 19 and 20 Part A delivering by March 15 for the previous calendar [SC VII.3]. Response was same as in item # 13 referring to annual reporting.

15. In compliance - AMP demonstrated the exhaust gases from coating line is discharged unobstructed vertically upwards to the ambient air at exit points not less than one and one half times the building height from ground level [SC VIII.1]. Response from AMP stated Stacks on all coating lines discharged unobstructed vertically upwards. No changes had occurred to stacks [Cover page item# 15].
FGMACT

16. In compliance- AMP demonstrated the amount of Organic HAP emissions in FGMACT did not exceed 2.6 lbs. per gallon of coating solids based on 12-month rolling time period. [SC I.]. Response from AMP stated Ajax Metals used the emission rates without add-on controls option for determining compliance with Misc. Metals part MACT [Exhibit 15 Q15].

17. In compliance- AMP did not need to demonstrate the permittee determined whether organic HAP emission rate was equal to or less than the applicable emission limits in 40 CFR 63.3891(a) through (c): (a) compliant material option, (b) emission rate without add-on controls, and (c) emission rate with add-on controls option. All coatings, thinners, and/or other additives, and cleaning materials used when determining the emission rate were maintained [SC 1.1]. Response stated the process was not applicable [Cover page item#17, Exhibit 15].

18. In compliance- AMP did not need to demonstrate the permittee complied with any coating operation (s) using the compliant material option or the emission rate without add-on controls option with applicable emission limits in 40 CFR 63.3890 at all times [SC I.2]. Process is not applicable [Cover page item# 18 indicaated-Ajax Metals uses emission rate without add-on controls option].

19. In compliance – AMP did not need to demonstrate each thinner and/or additive contains no organic HAP on continuous basis from each coating operation using compliant material option [SC II. 1] Response is same as in item# 18].

20. In compliance – AMP demonstrated each cleaning material contained no organic HAP on continuous basis from each coating operation using compliant material option [SC II.2]. Response indicated notification of compliance was submitted on 2/27/2008 [Cover page item# 20].

21. In compliance - AMP demonstrated permittee conducted an initial compliance reporting for initial compliance period according to 40 VFR 63.3941, 40 CFR 63.3951 or 40 CFR 63.3961 as applied [SC VI.1]. Response presented is same as in Exhibit Q15].

21. In compliance-AMP demonstrated permittee kept all records required by 40 CFR 63.3930 in the format and timeframes outlined in 40 CFR 63.3931 [SC VI.2]. The response is listed in Exhibit 15, Q15.

22. In compliance -AMP demonstrated the permittee maintained at minimum the following records for each compliance period as listed in [Exhibit 8]:
(a) A copy of each notification and report that is submitted to comply with subpart MMMM, and documentation supporting each notification and report [SC VI.3a]. The information is listed as in Q8.

(b) a current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP and density of each coating, thinner and /or other additive, and cleaning material, and the volume fraction of coating solids for each coating [SC VI.3b]. The information is listed as in Q8.

(c) A list of the coating operations on which each compliance option was used, and the beginning of and ending dates and times for each compliance option is used [SC VI.3c]. The response listed in Exhibit 8 stated all coating lines used emission rate without add-on control option indicating over control of emission monitoring [Cover page item# 22c]

(d) For the compliant materials option, the calculation of organic HAP content for each coating using equation 2 of 40 CFR 63.3941 [SC VI.3d]. Response indicated the process was not applicable in the case of AMP.

(e) For emissions rate without add-on controls option, the calculations of the total mass of organic HAP emissions for the coatings, thinners and/or additives, and cleaning materials used each month using equation 1, 1A through 1C and 2 of 40 CFR 63.3951; and where applicable, the calculation used to determine mass of organic HAP in waste materials according to 40 CFR 63.3951€(4); the calculation of the total volume of coating solids used each month using equation 2 of 40 CFR 63.3951; and the calculation of each 12-month organic HAP emission rate using equation 3 of 40 CFR 63.3951 [SC VI.3e]. The rersponse to this condition is listed in Exhibit 15, Q15].

(f) The name and mass or volume of each coating, thinner and /or additive, and cleaning material used during each compliance period [SC VI.3f]. The response same as is listed in Exhibit 11b.

(g) The mass and fraction of organic HAP for each coating, thinner and/or additive, and cleaning material used during each compliance period unless the material is tracked by weight [SC VI.3g]. The response is same as listed in Exhibit 8, Q8.

(h) The volume fraction of coating solids for each coating used during each compliance period [SC VI.3h].The response is same as in item 22g.

(I) For either emission rate without add-on controls option, the density of each
Coating, thinner and/or other additive, and cleaning material used during each compliance period [SC V. 3I]. The response is same as in item 22h.

(J) The information specific in 40 CFR 63.3930(h)(1) through (3), if an allowance is used in Equation 1 of 40 CFR 63.3951 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to 40 CFR 63.3951 (e)(4) [SC V.3j]. The response from AMP stated no allowance was used for waste solvent all purge clean-up and production solvents were reused as process additives. [Cover page, item 22j].

(k) The date, time, and duration of each compliance period, according to 40 CFR 63.3951 (a) through (g) [SC V.3k]. The information is in MACES file.

23. In compliance-AMP did not need to demonstrate for each coating used for the complainant coating option, permittee maintained continuous compliance with the emission limit in 40 CFR 63.3890, for each compliance period, using equation 2 of 40 CFR 63.3941 consistent with40 CFR 63.3941 (a) [SC V.4]. Response stated the process is not applicable [Cover page, item# 23].

24. In compliance - AMP demonstrated for any coating operation or group of coating operations using the emission rate without add-on controls option, permittee maintained continuous compliance with the applicable organic HAP emission limit in 40 CFR 63.3890, for each compliance period, according to 40 CFR 63.3951 (a) through (g) [SC V.5]. Response is same as listed in Exhibit 15, Q15].

25. Please demonstrate the permittee (a) promptly reported deviations pursuant to General Conditions 21 and 22 of Part A [SC VII.1]. Response stated no deviations required prompt reporting [Cover page, item 25]

26. In compliance – AMP demonstrated permittee complied with semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A covering period from July 1 to December 31 by March 10, and period covering January 1 to June 30 by September 15 [SC VII.2]. Response stated semiannul reports were reported timely [Cover page, item# 26].

27. In compliance- AMP demonstrated permittee complied with annual certification of compliance reporting to AQD office pursuant to General Conditions 19 and 20 of Part A by March 15 [SC VII.3]. The response is same as in [item# 26].

28. In compliance – AMP demonstrated for the compliant material option if any coating used for any 12-month compliance period exceeded the applicable emission limit specified in 40 CFR 63.3890; or any thinner or cleaning material used contained any organic HAP, and permittee reported the incident as deviation as specified in 40 CFR 63.3910 (c)(6) and 40 CFR 63.3920 (a)(5) [SC VII.4]. Response stated the process was not applicable (Cover page, item# 28].

29. In compliance- AMP did not need to demonstrate for the emission rate without add-on controls, if the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit specified in 40 CFR 63.3990, and permittee reported this as a deviation as specified in 40 CFR 63.3910 (c)(6) and 40 CFR 63.3920 (a)(6) [SC VII.5]. Response stated no deviations required prompt reporting [Cover page, item# 25]

30. In compliance - AMP demonstrated the permitee submitted the applicable notifications specified in 40 CFR 63.7(b), and (c), 63.8 (f)(4) and 63.9(b) through (e) and (h), an initial notification and a notification of compliance status as specified in 40 CFR 63.3910 [SC VII.6]. Response stated all required notifications were submitted [Cover page, item# 30]

31. In compliance – AMP demonstrated the permittee submitted all semiannual compliance reports specified in 40 CFR 63.3920(a) identifying each coating operations used corresponding to compliance option and any associated deviations from emission limitations in 40 CFR 63.3890 with a confirmation statement of compliance [SC VII.7]. Response is same as in item# 30.

32. In compliance-Please demonstrate permittee complied with all applicable provisions of the NESHAPs as specified in 40 CFR, Part 63, Subpart A and Subpart MMMM for surface coating of Miscellaneous metal Parts and Products by initial compliance date [SC IX.1]. The information is on AQD file [MACES Report Received].
FGPLATINGLINES

33. In compliance- AMP demonstrated permittee did not operate any plating line in FGPLATINGLINES unless the associated packed bed scrubber for the plating line was installed, maintained and operating properly consistent with MAP/PM specified in SC III.2 [SC III.1]. Response stated that plating lines operated per malfunction abatement plan (MAP) [Cover page, item# 33].

34. In compliance –AMP demonstrated permittee submitted to the AQD office for review and approval a preventive maintenance/malfunction abatement plan (PM/MAP) that had been updated to include the new identification for each emission unit in FGPLATINGLINES; and the permittee did not operate any plating line in FGPLATINGLINES unless the approved PM/MAP or alternate plan was implemented and maintained using the following procedures. The MAP submitted in March 2012 addressed the:
(a) Identification of the equipment and, if applicable, air cleaning device and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair [SC III.2(a)].
(b) Description of the items or conditions to be inspected and frequency of the inspections or repairs [SC III.2(b)]
(c) Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance [SC III.2(c)]
(d) Identification of the major replacement parts shall be maintained in inventory for quick replacement [SC III.2(d)]

(e) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits [SC III.2(e)].

35. In compliance-AMP demonstrated the parameters of the acid pickling tanks in FGPLATINGLINES did not exceed maximum concentration of Hydrochloric acid 17% by weight per maximum surface area of tank 39.1 sq. ft. at temperature maximum value 120 F [SC III.3.1]. Response presented daily records of concentrations as daily log that shows compliance [Exhibit 35].

36. In compliance – AMP demonstrated the permittee kept, in satisfactory manner, the following records for the FGPLATINGLINES:
(a) Written or electronic log of maximum monthly concentration of acid in the tank expressed as percent by volume of degrees Baume' HCL [SC VI.1(a)]. Records of electronic logs on acid tank concentrations are presented in Exhibit 36a.
(b) Area of the acid tank in square feet [SC VI.1(b)].The response indicated the tank surface areas did not change from design specifications [Cover page, item#36b]
(c) Temperature of the acid solution in the tank [SC VI.1(c)]. Response presented temperatures of acid solution logs [Exhibit 36c].
(d) Written or electronic log of the hours of operation [SC VI.1(d)]. Electronic logs of hours of operation are presented [Exhibit 36d].
(e) Corrective action taken upon failure of the following (i) the fans drawing vacuum on the acid, and (ii) the pumps circulating the scrubber water through the scrubber.[SC VI.1(e)]. Response indicated no correction action was necessary [Cover page, item# 36e]

37. In compliance-AMP conducted me around to verify through visual inspection that all stacks on scrubbers discharged gases unobstructed vertically upwards, and no changes were made to stacks. [SC VII.1-11]:

1. SV006 has maximum diameter 21 inches and 38 feet in height.
2. SVSCRUB1 ha maximum diameter 20 inches and 39 feet in height.
3. SVSCRUB3 has maximum diameter 20 inches and 39 inches in height.
4. SVSCRUB4 has maximum diameter 20 inches and 39 feet in height.
5. SVSCRUB11 has maximum diameter 20 inches and 38 feet in height.
6. SVSCRUB12 has maximum diameter 20 inches and 39 feet in height.
7. SVPLT1 has maximum diameter 38 inches and 31 feet in height.
8. SVPLT3 has maximum diameter 42 inches and 30 feet in height.
9. SVPLT4 has maximum diameter 46 inches and 31 feet in height.
10. SVPLT11 has maximum diameter 42 inches and 29 feet in height.
11. SVPLT12 has maximum diameter 42 inches and 29 feet in height. [Cover page, item 37].

FGRULE290

38. In compliance-AMP did not need to demonstrate each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic material which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1000 or 500 pounds per month respectively [SC I.1]. Response indicated the condition is not applicable to the process operated at the facility.

39. In compliance-AMP demonstrated in each emission unit that the total uncontrolled emissions of air contaminants are not more than 1000 or 500 pounds per month, respectively, and all the following criteria listed below are met:
(a) For noncacinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1000 or 500 pounds per month, respectively [SC I.2a]. Response provided emission summary and compliance levels [Exhibit 39].
(b) For noncacinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter, and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively [SC I.2b]. Response provided emission summary and compliance levels [Exhibit 39].

(c) For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions did not exceed 20 or 10 pounds per month, respectively [SC Ic]. Response provided emission summary and compliance levels [Exhibit 39].
(d) The emission unit did not emit any air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter [SC I.2d]. Response provided emission summary and compliance levels [Exhibit 39].

40. In compliance – AMP did not need to demonstrate the emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met. The condition was not applicable to the process:
(a) The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1000 pounds of exhaust gases and which did not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute [SC I.3a].

(b) The volatile emissions from emission unit were not more than 5 percent opacity in accordance with the methods contained in Rule 303 [SC I.3d].
(c) The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, was more than 2.0 micrograms per cubic meter [SC I.3c]. [Cover page, item 40].

41. In compliance-AMP demonstrated permittee maintained records of the following information for each emission unit calendar month using the methods outlined in the DEQ, AQD Rule 290, Permit to Install Exemption Record form (EQP 3558) or an alternative format that is approved by the AQD District Supervisor:

(a) Records identifying each air contaminant that is emitted [SC VI.1a]. Summary of contaminant is listed in Exhibit 39, Q39.

(b) Records identifying if each air contaminant is either controlled or uncontrolled [SC VI.1b]. Summary of contaminant is listed in Exhibit 39, Q39.

(c) Records identifying if Summary of contaminant is listed in Exhibit 39, Q39.
each air contaminant is either carcinogemnic or non-carcinogenic [SC VI.1c].

(d) Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(a)(ii) and (iii) [SC VI.1d]. Summary of contaminant is listed in Exhibit 39, Q39.

(e) Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the eission limits outlined in the table and Rule 290 [SC VI.1e]. Summary of contaminant is listed in Exhibit 39, Q39.

42. In compliance – AMP demonstrated permittee maintained an inventory of each emission unit that is exempt pursuant to Rule 290 in which the following information is included:

(a) The permittee maintained a written description of each emission unit as it is maintained and operated throughout the life of the emission unit [SC VI.2a]. Summary of contaminant is listed in Exhibit 39, Q39.

(b) For each emission unit that emits noncarcinogenic p[articulate air contaminants pursuant to Rule 290 (a)(iii), pemittee maintained a written description of the control device, including the design control efficiency and the designed exhaust gas flow rate [SC VI.2b]. Response stated that this condition is not applicable to the process [Cover page, item# 42b].

43. In compliance-AMP did not need to demonstrate for each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), permittee performed a monthly visible emission observation of each stack or vent during routine operating condition and kept a written record of the

results of each observation [SC VI.3]. Response stated the condition is not applicable to process [Cover page, item 43].

44. In compliance-AMP demonstrated permittee performed prompt reporting of deviations pursuant to general Conditions 21 and 22 of Part A [SC VII.1].

45. Please demonstrate permitee made semiannual reporting of monitoring and deviations pursuant to General COdition 23 of Part A to the AQD District Office by March 15, based on period July 1 to December 31, and by September 15 covering period January 1 to June 30 [SC VII.2]. Response stated no deviations required prompt reporting during the reporting period [Cove page, item# 44].

45. In compliance –AMP demonstrated permittee reported Semiannual certification of compliance pursuant to general Conditions 19 and 20 of Part A by march 15 [SC VII.3]. Response stated Semiannual reports were submitted promptly [Cover page, item# 45].
46. In compliance –AMP demonstrated permittee reported Annual certification of compliance pursuant to general Conditions 19 and 20 of Part A by march 15 [SC VII.3]. Response stated Annual reports were submitted promptly [Cover page, item# 45].

Areas of Interest:

Equipment: I observed the equipment while in operation. The equipment performed in satisfactory manner.

Workshop and Plant Floor Practices: The workshop and floor practices were satisfactorily conducted. Monitoring equipment on Scrubber parameters were observed to be satisfactorily maintained, and worked in satisfactory manner. Circulation water rates, and make up water rates parameters indicated within the specified set points. The floor was clean. There were no leaks or drips from plating tanks.

General hygiene: There were no littered objects in the plant. There were no open containers containing organic liquids. There were no unusual odors within the plant boundary limits. The hygiene inside the plant was satisfactorily upheld.

POLLUTANT EMISSIONS PER MAERS 2009 REPORT (TPY):

MAERS REPORT REVIEW:

The Ajax Metal Processing facility's 2012 MAERS was reviewed and found in compliance with reporting requirements.

CONCLUSION

The evaluation of Ajax Metal Processing Inc. identified no violation during and after the inspection. The Company demonstrated high level compliance with permit condition requirements by reporting and filing deviation reports timely. The work force and hours of operation have been reduced. The AMP currently operates under compliance conditions defined in the Renewal Operating permit# MI-ROP-B5830-2009 requirements. The information obtained during this inspection will be applied to assisting AMP for maintaining compliance with environmental pollution control needs.

NAME [illegible] DATE 8/28/13 SUPERVISOR W.M.

Weather History for Detroit, MI

Monday, July 29, 2013

Monday, July 29, 2013

« Previous Day | July | 29 | 2013 | View | Next Day »

Daily | Weekly | Monthly | Custom

	Actual	Average	Record
Temperature			
Mean Temperature	64 °F	-	
Max Temperature	71 °F	82 °F	94 °F (1988)
Min Temperature	57 °F	64 °F	54 °F (1952)
Degree Days			
Heating Degree Days	2		
Growing Degree Days	14 (Base 50)		
Moisture			
Dew Point	52 °F		
Average Humidity	66		
Maximum Humidity	75		
Minimum Humidity	53		
Precipitation			
Precipitation	0.00 in	-	- ()
Sea Level Pressure			
Sea Level Pressure	30.08 in		
Wind			
Wind Speed	8 mph (West)		
Max Wind Speed	10 mph		
Max Gust Speed	-		
Visibility	10 miles		
Events	Rain		

Averages and records for this station are not official NWS values.

Trace of Precipitation, **MM** = Missing Value **Source:** NWS Daily Summary

Seasonal Weather Averages

Ajax Metal Processing
ROP MI-ROP-B5830-2009a; B5830
4651 Bellevue Street
Detroit, MI 48207
Inspection Date 7/29/2013

1. No Changes
2. See Exhibit 2 – VOC Emissions Summary
3. See Exhibit 2 (Question 2)
4. See Exhibit 2 (Question 2)
5. All purge clean-up and production solvents are reused as process (product) additives.
6. Not applicable (NA)
7. Coating application is flowcoat and dip spin.
8. Manufacturer's formulation data (i.e. MSDSs) is used to determine VOC Content. See Exhibit 8 for a coating formulation summary.
9. NA
10. NA
11. See the following Exhibits
    a. See Exhibit 11a – Purchase order Records
    b. See Exhibit 11b – Monthly Coating Usage, which includes Reducers and Solvents
    c. See Exhibit 11b (Question 11b)
    d. See Exhibit 2 (Question 2)
    e. See Exhibit 2 (Question 2)
    f. No changes
    g. See Exhibit 11b (Question 11b), which identifies the month when new coatings were added.
    h. See Exhibit 8 (Question 8)
12. No deviations required prompt reporting
13. Semiannual and Annual reports submitted timely
14. Stacks on all coating lines are discharged unobstructed vertically upwards. NO changes have occurred to stacks
15. See Exhibit 15 – HAP Emissions Summary
16. Ajax Metal uses the Emission Rate without Add-On Controls option for determining compliance with Misc. Metals Part MACT. See Exhibit 15 (Question 15)
17. See Exhibit 15 (Question 15)
18. NA - Ajax Metal uses the Emission Rate without Add-On Controls option
19. NA - Ajax Metal uses the Emission Rate without Add-On Controls option
20. Notification of Compliance Status was submitted on 2/27/2008
21. See Exhibit 15 (Question 15)
22. See the following
    a. Semiannual reports submitted timely
    b. See Exhibit 8 (Question 8)
    c. All coating lines use the Emission Rate without Add-On Controls option
    d. NA - Ajax Metal uses the Emission Rate without Add-On Controls option
    e. See Exhibit 15 (Question 15)
    f. See Exhibit 11b (Question 11b)
    g. See Exhibit 8 (Question 8)
    h. See Exhibit 8 (Question 8)

i. See Exhibit 8 (Question 8)
j. No allowance used for waste solvent. All purge clean-up and production solvents are reused as process (product) additives.
k. No records requested

23. NA - Ajax Metal uses the Emission Rate without Add-On Controls option
24. See Exhibit 15 (Question 15)
25. No deviations required prompt reporting
26. Semiannual reports submitted timely
27. Annual reports submitted timely
28. NA - Ajax Metal uses the Emission Rate without Add-On Controls option
29. No deviations from emission rate see Exhibit 15 (Question 15)
30. All required notifications submitted
31. Semiannual reports submitted timely
32. No records requested
33. Plating Lines Operated Per Malfunction Abatement Plan (MAP)
34. MAP was submitted in March 2012
35. Records kept on daily chemical logs, See Exhibit 35 – Example Daily Log
36. See the following
    a. See Exhibit 36a
    b. No changes to tank surface areas
    c. See Exhibit 36c
    d. See Exhibit 36d
    e. No corrective action necessary
37. Stacks on all scrubbers are discharged unobstructed vertically upwards. No changes have occurred to stacks
38. NA
39. (a-d) See Exhibit 39 – Rule 290 Records
40. NA
41. (a-e) See Exhibit 39 (Question 39)
42. (a) See Exhibit 39; (b) NA
43. NA
44. No deviations required prompt reporting
45. Semiannual reports submitted timely
46. Annual reports submitted timely

VOC Emissions Summary Per Coating Line

Ajax Metal Processing
Detroit, MI

	EUDIPSPIN				EUWHEEL1			
Month	Emissions from EUDIPSPIN (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)	Emissions from EUWHEEL1 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)
Jan-12	4.2E-02	Yes	0.8	Yes	0.3	Yes	3.8	Yes
Feb-12	6.5E-02	Yes	0.8	Yes	0.3	Yes	3.8	Yes
Mar-12	5.2E-02	Yes	0.8	Yes	0.3	Yes	3.6	Yes
Apr-12	7.0E-02	Yes	0.8	Yes	0.4	Yes	3.9	Yes
May-12	4.9E-02	Yes	0.8	Yes	0.3	Yes	3.9	Yes
Jun-12	5.5E-02	Yes	0.7	Yes	0.3	Yes	3.9	Yes
Jul-12	1.1E-01	Yes	0.8	Yes	0.3	Yes	3.9	Yes
Aug-12	4.4E-02	Yes	0.8	Yes	0.4	Yes	4.0	Yes
Sep-12	5.7E-02	Yes	0.7	Yes	0.4	Yes	3.9	Yes
Oct-12	2.6E-02	Yes	0.7	Yes	0.3	Yes	3.9	Yes
Nov-12	6.4E-02	Yes	0.7	Yes	0.4	Yes	4.0	Yes
Dec-12	4.8E-02	Yes	0.7	Yes	0.3	Yes	4.0	Yes
Jan-13	9.6E-02	Yes	0.7	Yes	0.3	Yes	4.0	Yes
Feb-13	4.7E-02	Yes	0.7	Yes	0.3	Yes	4.1	Yes
Mar-13	1.0E-01	Yes	0.8	Yes	0.4	Yes	4.2	Yes
Apr-13	6.0E-02	Yes	0.8	Yes	0.5	Yes	4.2	Yes
May-13	7.0E-02	Yes	0.8	Yes	0.6	Yes	4.6	Yes
Jun-13	1.3E-01	Yes	0.9	Yes	0.4	Yes	4.7	Yes

VOC Emissions Summary Per Coating Line

Ajax Metal Processing
Detroit, MI

	EUWHEEL2				EUWHEEL3			
Month	Emissions from EUWHEEL2 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)	Emissions from EUWHEEL3 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)
Jan-12	0.3	Yes	3.8	Yes	0.3	Yes	3.8	Yes
Feb-12	0.3	Yes	3.8	Yes	0.3	Yes	3.8	Yes
Mar-12	0.3	Yes	3.6	Yes	0.3	Yes	3.6	Yes
Apr-12	0.4	Yes	3.9	Yes	0.4	Yes	3.9	Yes
May-12	0.3	Yes	3.9	Yes	0.3	Yes	3.9	Yes
Jun-12	0.3	Yes	3.9	Yes	0.3	Yes	3.9	Yes
Jul-12	0.3	Yes	3.9	Yes	0.3	Yes	3.9	Yes
Aug-12	0.4	Yes	4.0	Yes	0.4	Yes	4.0	Yes
Sep-12	0.4	Yes	3.9	Yes	0.4	Yes	3.9	Yes
Oct-12	0.3	Yes	3.9	Yes	0.3	Yes	3.9	Yes
Nov-12	0.4	Yes	4.0	Yes	0.4	Yes	4.0	Yes
Dec-12	0.3	Yes	4.0	Yes	0.3	Yes	4.0	Yes
Jan-13	0.3	Yes	4.0	Yes	0.3	Yes	4.0	Yes
Feb-13	0.3	Yes	4.1	Yes	0.3	Yes	4.1	Yes
Mar-13	0.4	Yes	4.2	Yes	0.4	Yes	4.2	Yes
Apr-13	0.5	Yes	4.2	Yes	0.5	Yes	4.2	Yes
May-13	0.6	Yes	4.6	Yes	0.6	Yes	4.6	Yes
Jun-13	0.4	Yes	4.7	Yes	0.4	Yes	4.7	Yes

VOC Emissions Summary Per Coating Line

Ajax Metal Processing
Detroit, MI

	EUWHEEL4				EULOCTITE1			
Month	Emissions from EUWHEEL4 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)	Emissions from EULOCTITE1 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)
Jan-12	1.4E-03	Yes	0.0	Yes	4.0E-02	Yes	0.5	Yes
Feb-12	1.3E-03	Yes	0.0	Yes	4.5E-02	Yes	0.5	Yes
Mar-12	2.6E-03	Yes	0.0	Yes	4.5E-02	Yes	0.5	Yes
Apr-12	1.0E-03	Yes	0.0	Yes	3.8E-02	Yes	0.5	Yes
May-12	9.0E-04	Yes	0.0	Yes	7.0E-02	Yes	0.5	Yes
Jun-12	2.3E-03	Yes	0.0	Yes	2.9E-02	Yes	0.5	Yes
Jul-12	2.1E-03	Yes	0.0	Yes	4.5E-02	Yes	0.5	Yes
Aug-12	2.0E-03	Yes	0.0	Yes	4.3E-02	Yes	0.5	Yes
Sep-12	2.2E-03	Yes	0.0	Yes	2.0E-02	Yes	0.5	Yes
Oct-12	1.6E-03	Yes	0.0	Yes	4.0E-02	Yes	0.5	Yes
Nov-12	1.8E-03	Yes	0.0	Yes	2.3E-02	Yes	0.5	Yes
Dec-12	7.5E-04	Yes	0.0	Yes	2.9E-02	Yes	0.5	Yes
Jan-13	1.8E-03	Yes	0.0	Yes	4.7E-02	Yes	0.5	Yes
Feb-13	2.1E-03	Yes	0.0	Yes	2.8E-02	Yes	0.5	Yes
Mar-13	2.0E-03	Yes	0.0	Yes	3.9E-02	Yes	0.5	Yes
Apr-13	2.1E-03	Yes	0.0	Yes	3.8E-02	Yes	0.5	Yes
May-13	1.3E-03	Yes	0.0	Yes	5.3E-02	Yes	0.4	Yes
Jun-13	2.1E-03	Yes	0.0	Yes	4.6E-02	Yes	0.5	Yes

VOC Emissions Summary Per Coating Line

Ajax Metal Processing
Detroit, MI

	EULOCTITE2				EULOCTITE3			
Month	Emissions from EULOCTITE2 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)	Emissions from EULOCTITE3 (tons/mth)	In Compliance <1 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)
Jan-12	2.8E-02	Yes	0.4	Yes	4.0E-02	Yes	0.5	Yes
Feb-12	3.5E-02	Yes	0.4	Yes	4.5E-02	Yes	0.5	Yes
Mar-12	3.8E-02	Yes	0.4	Yes	4.7E-02	Yes	0.5	Yes
Apr-12	2.9E-02	Yes	0.4	Yes	4.1E-02	Yes	0.5	Yes
May-12	5.6E-02	Yes	0.4	Yes	7.2E-02	Yes	0.5	Yes
Jun-12	2.0E-02	Yes	0.4	Yes	3.4E-02	Yes	0.5	Yes
Jul-12	3.2E-02	Yes	0.4	Yes	4.9E-02	Yes	0.5	Yes
Aug-12	2.6E-02	Yes	0.4	Yes	4.3E-02	Yes	0.5	Yes
Sep-12	1.8E-02	Yes	0.4	Yes	2.2E-02	Yes	0.5	Yes
Oct-12	2.6E-02	Yes	0.4	Yes	4.1E-02	Yes	0.5	Yes
Nov-12	2.0E-02	Yes	0.3	Yes	2.3E-02	Yes	0.5	Yes
Dec-12	1.4E-02	Yes	0.3	Yes	2.9E-02	Yes	0.5	Yes
Jan-13	3.2E-02	Yes	0.3	Yes	4.8E-02	Yes	0.5	Yes
Feb-13	2.8E-02	Yes	0.3	Yes	2.8E-02	Yes	0.5	Yes
Mar-13	2.9E-02	Yes	0.3	Yes	4.0E-02	Yes	0.5	Yes
Apr-13	2.8E-02	Yes	0.3	Yes	3.9E-02	Yes	0.5	Yes
May-13	4.3E-02	Yes	0.3	Yes	5.6E-02	Yes	0.4	Yes
Jun-13	3.6E-02	Yes	0.3	Yes	4.8E-02	Yes	0.5	Yes

VOC Emissions Summary Per Coating Line

Ajax Metal Processing
Detroit, MI

	Wax Line				TOTAL VOC EMISSIONS		
Month	Emissions from Wax Line (tons/mth)	In Compliance <0.5 ton per month (yes/no)	12-Month Rolling VOC (tons/yr)	In Compliance <10 tons per 12-month rolling (yes/no)	TOTAL VOC EMISSIONS (tons/mth)	12-Month Rolling VOC (tons/yr)	In Compliance <30 tons per 12-month rolling (yes/no)
Jan-12	4.4E-02	Yes	0.4	Yes	1.2	14.0	Yes
Feb-12	2.8E-02	Yes	0.4	Yes	1.1	14.1	Yes
Mar-12	1.4E-02	Yes	0.4	Yes	1.1	13.4	Yes
Apr-12	3.0E-02	Yes	0.4	Yes	1.5	14.1	Yes
May-12	4.3E-02	Yes	0.4	Yes	1.2	14.3	Yes
Jun-12	3.1E-02	Yes	0.4	Yes	1.1	14.3	Yes
Jul-12	2.8E-02	Yes	0.4	Yes	1.2	14.4	Yes
Aug-12	2.9E-02	Yes	0.4	Yes	1.4	14.5	Yes
Sep-12	2.5E-02	Yes	0.4	Yes	1.2	14.3	Yes
Oct-12	2.4E-02	Yes	0.4	Yes	1.1	14.0	Yes
Nov-12	2.8E-02	Yes	0.4	Yes	1.3	14.4	Yes
Dec-12	1.6E-02	Yes	0.3	Yes	1.0	14.5	Yes
Jan-13	3.0E-02	Yes	0.3	Yes	1.3	14.5	Yes
Feb-13	2.0E-02	Yes	0.3	Yes	1.2	14.7	Yes
Mar-13	2.2E-02	Yes	0.3	Yes	1.4	14.9	Yes
Apr-13	2.8E-02	Yes	0.3	Yes	1.6	15.1	Yes
May-13	3.3E-02	Yes	0.3	Yes	2.2	16.1	Yes
Jun-13	1.8E-02	Yes	0.3	Yes	1.6	16.5	Yes

Ajax Metal Processing

COATING		516 Vibra Seal 152 LT	Altraseal 6174	Altraseal 6351	Aqua Phos 187 Black OB	Aqua Phos 193T Black OB	Argent 6106-A	Butyl Cellosolve	Brulin 10B Nut Lube	Castrol Safety Film 639	DPI-24 Clear	DPI-24 Green	DPI-24 Light Blue	DPI-24 Purple	DPI-24 White	DPI-24 Yellow	Dri Seal 513	Dri-Loc 201 SS#78	Dri-Loc 204 Adhesive Binder SS156
Density	lbs/gal	9.55	9.18	9.20	9.18	9.18	9.08	7.53	8.01	8.42	7.42	7.63	7.76	7.54	7.77	7.87	11.13	8.10	9.21
VOC Content	lbs/gal	0.29	1.50	1.69	1.80	1.50	0.00	7.53	1.34	0.37	2.75	6.09	6.30	6.07	6.23	6.30	0.81	0.86	0.72
% Solids	vol%	98.5%	35.6%	39.0%	47.7%	48.5%		0.0%	42.3%		60.5%	11.6%	10.5%	13%	10%	11%	90.32%	89%	91.43%
Hazardous Air Pollutants																			
formaldehyde	50-00-0																	0.6%	
methanol	67-56-1											5%	5%	5%	5%	5%			
styrene monomer	100-42-5																1%		
epichlorohydrin	106-89-8																		
methly isobutyl ketone	108-10-1										5%	5%	5%	1%	1.0%	1.0%			
toluene	108-88-3										20%			5%	5%	20%		0.04%	
triethylamine	121-44-8				1.5%	2.3%													
xylene	1330-20-7										5%								
glycol ethers				5%	5.0%	3.5%						30%			30%				

Ajax Metal Processing

COATING		Dri-Loc 205 SS#179	Dri-Loc Activator P-2	Dri-Loc Adhesive 200 SS#74	Dri-Loc Adhesive 202 SS#75	DuralonJM Pink, 1-A-6	EPC-1881/Ajax Blue Ptfe Modified Epoxy WB	EPC 2364 Yellow	Isopropyl Acetate	Kimya 3010 Oil	Lab Oil 100	Loctite 2045 Threadlocker, Dri-Loc Part A	Loctite Activator P-3	MM-140	ND Microspheres #893SBHV (Blue)	ND Microspheres AA0095 Activator	ND Microspheres AA0795 (Yellow)	ND ST-3-W Sealant (White Sealant)
Density	lbs/gal	8.82	11.15	8.58	8.35	11	9.14	9.21	7.24746	8.048	7.76	8.88	8.35	7.92	8.85	11.14	8.77	10.01
VOC Content	lbs/gal	0.65	0.07	0.62	0.14	0.11	3.30	2.62	7.25	0.40	0.78	0.01	0.00	6.10	3.08	0.00	0.29	0.03
% Solids	vol%	93.19%	100%	92.53%	98.38%	100%	21.6%		0.00%			99.90%	100%	10%	57.6%	100%	53.0%	60.7%
Hazardous Air Pollutants																		
formaldehyde	50-00-0			1%	1%							1%						0.03%
methanol	67-56-1																	
styrene monomer	100-42-5																	
epichlorohydrin	106-89-8														0.0001%			
methly isobutyl ketone	108-10-1													30%				
toluene	108-88-3														40%			
triethylamine	121-44-8																	
xylene	1330-20-7																	
glycol ethers																	3.35%	

Ajax Metal Processing

COATING		Preapplied Thread Sealant (Dri-Loc STS)	Precote 30	Precote 80	Precote 85	Scotch-Grip Brand Fastener Adhesive 2353 (Blue)	Scotch-Grip Brand Fastener Adhesive EC2510 (Orange)	Scotch-Grip Brand Fastener Adhesive EC4844 (Yellow)	Scotch-Grip Brand Thread Sealant 4291	Texacote 452	TNT 12	TNT 15	TNT UV Fluid	Toluene
Density	lbs/gal	8.84	10.008	10.008	10.008	8.34	8.34	8.34	10.02	9.34	8.674	8.657	8.42	7.26
VOC Content	lbs/gal	0.13	2.00	2.50	2.50	3.09	4.01	3.17	0.20	1.87	0.26	0.26	0.00	7.26
% Solids	vol%	98.42%	73.1%	66.6%	66.6%	65.44%	49.55%	65.44%	59.00%	38%	25%	18%	0%	0%
Hazardous Air Pollutants														
formaldehyde	50-00-0													
methanol	67-56-1													
styrene monomer	100-42-5													
epichlorohydrin	106-89-8													
methly isobutyl ketone	108-10-1													
toluene	108-88-3		20%	25%	25%	37%	42%	38%						100%
triethylamine	121-44-8													
xylene	1330-20-7													
glycol ethers										7.6%				

Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: TNT 15 **Product Name:** BLACK TORQUE N° TENSION 15 (1.038)
Reference #: 000776

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347556	Purchase	06/04/2012	499.00 LB	499.00 LB	(location not assigned)	D14	P38800
755347788	Purchase	07/09/2012	499.00 LB	998.00 LB	(location not assigned)	D14	P38994
755347769	Purchase	08/03/2012	1,905.44 LB	2,903.44 LB	(location not assigned)	D14	P39177
755348050	Purchase	11/01/2012	499.00 LB	3,402.44 LB	(location not assigned)	D14	P39710
755348328	Purchase	01/04/2013	1,497.00 LB	2,363.11 LB	(location not assigned)	D14	P40070
755348357	Purchase	01/08/2013	499.00 LB	2,862.11 LB	(location not assigned)	D14	P40070
755348527	Purchase	03/06/2013	1,497.00 LB	4,359.11 LB	(location not assigned)	D14	P40505
755348908	Purchase	05/02/2013	1,997.00 LB	6,356.11 LB	(location not assigned)	D14	P40849
755348721	Purchase	05/08/2013	2,995.00 LB	9,351.11 LB	(location not assigned)	D14	P40796
755348753	Purchase	06/07/2013	499.00 LB	9,850.11 LB	(location not assigned)	D14	P41007

** Inventory levels reflect actual transactions and do not reflect assumed usage.
Transactions must be in date order for display of running inventory levels.

Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: BUTYL SOLVENT **Product Name:** BUTYL CELLOSOLVE SOLVENT
Reference #: 000711

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347522	Purchase	06/08/2012	820.00 LB	820.00 LB	(location not assigned)	D14	P38835
755347708	Purchase	07/02/2012	1,640.00 LB	2,460.00 LB	(location not assigned)	D14	P38982
755347824	Purchase	08/30/2012	1,640.00 LB	4,100.00 LB	(location not assigned)	D14	P39310
755347908	Purchase	10/19/2012	1,640.00 LB	5,740.00 LB	(location not assigned)	D14	P39643
755348098	Purchase	12/06/2012	820.00 LB	6,560.00 LB	(location not assigned)	D14	P39893
755348406	Purchase	01/04/2013	1,640.00 LB	2,015.69 LB	(location not assigned)	D14	P40060
755348584	Purchase	03/01/2013	1,230.00 LB	3,245.69 LB	(location not assigned)	D14	P40480
755348588	Purchase	03/04/2013	410.00 LB	3,655.69 LB	(location not assigned)	D14	P40480
755348597	Purchase	04/04/2013	820.00 LB	4,475.69 LB	(location not assigned)	D14	P40648
755348648	Purchase	04/29/2013	1,640.00 LB	6,115.69 LB	(location not assigned)	D14	P40821
755348774	Purchase	06/07/2013	820.00 LB	6,935.69 LB	(location not assigned)	D14	P41022

** Inventory levels reflect actual transactions and do not reflect assumed usage.
Transactions must be in date order for display of running inventory levels.

Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: MM-140 ALL COLR **Product Name:** CARCO INK ALL COLORS (7.91)
Reference #: 000781

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347613	Purchase	07/13/2012	4.00 GA	4.00 GA	(location not assigned)	D14	P38981
755347754	Purchase	08/17/2012	4.00 GA	8.00 GA	(location not assigned)	D14	P39176
755348134	Purchase	11/30/2012	4.00 GA	12.00 GA	(location not assigned)	D14	P39881
755348133	Purchase	12/04/2012	2.00 GA	14.00 GA	(location not assigned)	D14	P39892
755348400	Purchase	01/10/2013	12.00 GA	25.00 GA	(location not assigned)	D14	P40057
755348456	Purchase	02/25/2013	8.00 GA	33.00 GA	(location not assigned)	D14	P40287
755348739	Purchase	06/12/2013	4.00 GA	37.00 GA	(location not assigned)	D14	P41021

** Inventory levels reflect actual transactions and do not reflect assumed usage.
Transactions must be in date order for display of running inventory levels.

Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC 200 **Product Name:** DRI-LOC ADHESIVE 200 AQUEOUS DISPERSION
Reference #: 000243

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347587	Purchase	06/04/2012	202.28 LB	202.28 LB	(location not assigned)	D14	P38741
755347607	Purchase	07/02/2012	404.55 LB	606.83 LB	(location not assigned)	D14	P38980
755347671	Purchase	08/09/2012	202.28 LB	809.10 LB	(location not assigned)	D14	P39175
755347808	Purchase	09/04/2012	404.55 LB	1,213.65 LB	(location not assigned)	D14	P39311
755348001	Purchase	11/02/2012	202.28 LB	1,415.93 LB	(location not assigned)	D14	P39700
755348100	Purchase	12/07/2012	202.28 LB	1,618.20 LB	(location not assigned)	D14	P39897
755348303	Purchase	01/08/2013	404.55 LB	2,348.70 LB	(location not assigned)	D14	P40056
755348478	Purchase	02/08/2013	121.37 LB	2,470.07 LB	(location not assigned)	D14	P40286
755348577	Purchase	03/04/2013	121.37 LB	2,591.43 LB	(location not assigned)	D14	P40479
755348536	Purchase	03/25/2013	121.37 LB	2,712.80 LB	(location not assigned)	D14	P40554
755348634	Purchase	04/16/2013	404.55 LB	3,117.35 LB	(location not assigned)	D14	P40647
755348733	Purchase	05/01/2013	404.55 LB	3,521.90 LB	(location not assigned)	D14	P40836
755348942	Purchase	05/24/2013	202.28 LB	3,724.17 LB	(location not assigned)	D14	P40968

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC 201 **Product Name:** DRI-LOC 201 SS#78
Reference #: 000176

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347585	Purchase	06/04/2012	399.92 LB	399.92 LB	(location not assigned)	D14	P38741
755347605	Purchase	07/02/2012	399.92 LB	799.84 LB	(location not assigned)	D14	P38980
755347670	Purchase	08/09/2012	199.96 LB	999.80 LB	(location not assigned)	D14	P39175
755347807	Purchase	09/04/2012	399.92 LB	1,399.72 LB	(location not assigned)	D14	P39311
755348302	Purchase	01/08/2013	199.96 LB	499.96 LB	(location not assigned)	D14	P40056
755348477	Purchase	02/08/2013	199.96 LB	699.92 LB	(location not assigned)	D14	P40286
755348535	Purchase	03/25/2013	399.92 LB	1,099.84 LB	(location not assigned)	D14	P40554
755348668	Purchase	04/08/2013	399.92 LB	1,499.76 LB	(location not assigned)	D14	P40647
755348736	Purchase	05/01/2013	199.96 LB	1,699.72 LB	(location not assigned)	D14	P40836
755348769	Purchase	06/03/2013	399.92 LB	2,099.64 LB	(location not assigned)	D14	P40968

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC 204 **Product Name:** DRI-LOC 204 ADHESIVE BINDER
Reference #: 000190

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347584	Purchase	06/04/2012	200.62 LB	200.62 LB	(location not assigned)	D14	P38741
755347608	Purchase	07/02/2012	200.62 LB	401.24 LB	(location not assigned)	D14	P38980
755347805	Purchase	09/04/2012	200.62 LB	601.87 LB	(location not assigned)	D14	P39311
755348003	Purchase	11/02/2012	401.24 LB	1,003.11 LB	(location not assigned)	D14	P39700
755348479	Purchase	02/08/2013	120.37 LB	480.37 LB	(location not assigned)	D14	P40286
755348578	Purchase	03/04/2013	200.62 LB	681.00 LB	(location not assigned)	D14	P40479
755348537	Purchase	03/25/2013	120.37 LB	801.37 LB	(location not assigned)	D14	P40554
755348670	Purchase	04/08/2013	120.37 LB	921.74 LB	(location not assigned)	D14	P40647
755348737	Purchase	05/02/2013	120.37 LB	1,042.11 LB	(location not assigned)	D14	P40836
755348738	Purchase	05/02/2013	120.37 LB	1,162.49 LB	(location not assigned)	D14	P40836
755348905	Purchase	05/24/2013	200.62 LB	1,363.11 LB	(location not assigned)	D14	P40968
755348815	Purchase	06/19/2013	200.62 LB	1,563.73 LB	(location not assigned)	D14	P41102

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC 205 **Product Name:** DRI-LOC 205 AQUEUS DISPERSION 19840
Reference #: 000452

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347586	Purchase	06/04/2012	119.98 LB	119.98 LB	(location not assigned)	D14	P38741
755347606	Purchase	07/02/2012	119.98 LB	239.95 LB	(location not assigned)	D14	P38980
755347804	Purchase	09/04/2012	79.98 LB	319.94 LB	(location not assigned)	D14	P39311
755348336	Purchase	02/18/2013	79.98 LB	174.98 LB	(location not assigned)	D14	P40286
755348568	Purchase	03/06/2013	119.98 LB	294.96 LB	(location not assigned)	D14	P40479
755348669	Purchase	04/08/2013	119.98 LB	414.94 LB	(location not assigned)	D14	P40647

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC 2045 **Product Name:** DRI-LOC 2045 Part A
Reference #: 000347

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347539	Purchase	06/06/2012	507.07 LB	507.07 LB	(location not assigned)	D14	P38741
755347524	Purchase	06/12/2012	405.65 LB	912.72 LB	(location not assigned)	D14	P38838
755347604	Purchase	07/02/2012	405.65 LB	1,318.37 LB	(location not assigned)	D14	P38980
755347672	Purchase	08/09/2012	507.07 LB	1,825.44 LB	(location not assigned)	D14	P39175
755347811	Purchase	09/04/2012	1,000.00 LB	2,825.44 LB	(location not assigned)	D14	P39311
755347898	Purchase	10/02/2012	811.31 LB	3,636.74 LB	(location not assigned)	D14	P39496
755348002	Purchase	11/02/2012	405.65 LB	4,042.40 LB	(location not assigned)	D14	P39700
755348099	Purchase	12/07/2012	405.65 LB	4,448.05 LB	(location not assigned)	D14	P39897
755348301	Purchase	01/08/2013	811.31 LB	1,303.31 LB	(location not assigned)	D14	P40056
755348476	Purchase	02/08/2013	608.48 LB	1,911.78 LB	(location not assigned)	D14	P40286
755348576	Purchase	03/04/2013	811.31 LB	2,723.09 LB	(location not assigned)	D14	P040479
755348667	Purchase	04/08/2013	608.48 LB	3,331.57 LB	(location not assigned)	D14	P40647
755348732	Purchase	05/01/2013	608.48 LB	3,940.05 LB	(location not assigned)	D14	P40836
755348941	Purchase	05/24/2013	608.48 LB	4,548.53 LB	(location not assigned)	D14	P40968
755348814	Purchase	06/19/2013	507.07 LB	5,055.59 LB	(location not assigned)	D14	P41102

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC P-2 **Product Name:** DRI-LOC ACTIVATOR P-2
Reference #: 000257

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347589	Purchase	06/04/2012	74.97LB	74.97 LB	(location not assigned)	D14	P38741
755347526	Purchase	06/12/2012	49.98LB	124.95 LB	(location not assigned)	D14	P38838
755347610	Purchase	07/02/2012	99.96LB	224.91 LB	(location not assigned)	D14	P38980
755347674	Purchase	08/09/2012	39.98LB	264.89 LB	(location not assigned)	D14	P39175
755347806	Purchase	09/04/2012	74.97LB	339.86 LB	(location not assigned)	D14	P39311
755347942	Purchase	10/02/2012	49.98LB	389.84 LB	(location not assigned)	D14	P39496
755348005	Purchase	11/02/2012	74.97LB	464.81 LB	(location not assigned)	D14	P39700
755348102	Purchase	12/07/2012	74.97LB	539.78 LB	(location not assigned)	D14	P39897
755348305	Purchase	01/08/2013	74.97LB	185.97 LB	(location not assigned)	D14	P40056
755348481	Purchase	02/08/2013	39.98LB	225.95 LB	(location not assigned)	D14	P40286
755348580	Purchase	03/04/2013	39.98LB	265.94 LB	(location not assigned)	D14	P40479
755348672	Purchase	04/08/2013	74.97LB	340.90 LB	(location not assigned)	D14	P40647
755348735	Purchase	05/01/2013	74.96LB	415.86 LB	(location not assigned)	D14	P40836
755348906	Purchase	05/29/2013	99.96LB	515.82 LB	(location not assigned)	D14	P40968
755348813	Purchase	06/24/2013	49.98LB	565.80 LB	(location not assigned)	D14	P41102

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC STS **Product Name:** PREAPPLIED THREAD SEALANT STS
Reference #: 000401

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347588	Purchase	06/04/2012	399.92 LB	399.92 LB	(location not assigned)	D14	P38741
755347525	Purchase	06/12/2012	799.84 LB	1,199.76 LB	(location not assigned)	D14	P388838
755347609	Purchase	07/02/2012	399.92 LB	1,599.68 LB	(location not assigned)	D14	P38980
755347673	Purchase	08/09/2012	199.96 LB	1,799.64 LB	(location not assigned)	D14	P39175
755347809	Purchase	09/04/2012	599.88 LB	2,399.52 LB	(location not assigned)	D14	P39311
755347941	Purchase	10/02/2012	399.92 LB	2,799.45 LB	(location not assigned)	D14	P39496
755348004	Purchase	11/02/2012	400.00 LB	3,199.45 LB	(location not assigned)	D14	P39700
755348101	Purchase	12/07/2012	399.92 LB	3,599.37 LB	(location not assigned)	D14	P39897
755348304	Purchase	01/08/2013	399.92 LB	1,335.92 LB	(location not assigned)	D14	P40056
755348480	Purchase	02/08/2013	199.96 LB	1,535.88 LB	(location not assigned)	D14	P40286
755348579	Purchase	03/04/2013	399.92 LB	1,935.80 LB	(location not assigned)	D14	P40479
755348671	Purchase	04/08/2013	399.92 LB	2,335.72 LB	(location not assigned)	D14	P40647
755348734	Purchase	05/01/2013	399.92 LB	2,735.64 LB	(location not assigned)	D14	P40836
755348943	Purchase	05/24/2013	799.84 LB	3,535.49 LB	(location not assigned)	D14	P40968
755348816	Purchase	06/19/2013	79.98 LB	3,615.47 LB	(location not assigned)	D14	P41102
755348812	Purchase	06/24/2013	119.98 LB	3,735.45 LB	(location not assigned)	D14	P41102

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-NYLON PINK **Product Name:** DURALON JM PINK 1-A-6
Reference #: 000175

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347580	Purchase	06/04/2012	803.00 LB	803.00 LB	(location not assigned)	D14	P38698
755347509	Purchase	06/05/2012	504.00 LB	1,307.00 LB	(location not assigned)	D14	P38526
755347602	Purchase	07/10/2012	998.00 LB	2,305.00 LB	(location not assigned)	D14	P38979
755347940	Purchase	10/04/2012	1,011.00 LB	3,316.00 LB	(location not assigned)	D14	P39497
755348294	Purchase	01/09/2013	1,021.00 LB	1,531.00 LB	(location not assigned)	D14	P40055
755348933	Purchase	06/20/2013	987.00 LB	2,518.00 LB	(location not assigned)	D14	P41020

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-3M 2510 ORG **Product Name:** EC-2510 ORANGE FASTENER ADHESIVE (1.0)
Reference #: 000308

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347739	Purchase	06/20/2012	625.80LB	625.80 LB	(location not assigned)	D14	P38901
755347612	Purchase	07/13/2012	625.80LB	1,251.60 LB	(location not assigned)	D14	P38977
755347714	Purchase	07/16/2012	319.78LB	1,571.38 LB	(location not assigned)	D14	P38977
755347915	Purchase	10/11/2012	417.20LB	1,988.58 LB	(location not assigned)	D14	P39309
755348097	Purchase	12/06/2012	625.80LB	2,614.38 LB	(location not assigned)	D14	P39895
755348392	Purchase	01/09/2013	470.00LB	1,346.12 LB	(location not assigned)	D14	P40053
755348293	Purchase	01/10/2013	417.20LB	1,763.32 LB	(location not assigned)	D14	P40053
755348474	Purchase	02/06/2013	417.20LB	2,180.52 LB	(location not assigned)	D14	P40285
755348509	Purchase	03/14/2013	417.20LB	2,597.72 LB	(location not assigned)	D14	P40477
755348715	Purchase	05/06/2013	2,086.00LB	4,683.72 LB	(location not assigned)	D14	P40579
755348772	Purchase	06/07/2013	704.99LB	5,388.71 LB	(location not assigned)	D14	P41019

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-3M 4844 YELW **Product Name:** SCOTCH GRIP FASTENER ADHESIVE EC4844 YELLOW (1.0)
Reference #: 000246

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347740	Purchase	06/20/2012	166.88LB	166.88 LB	(location not assigned)	D14	P38901
755348394	Purchase	01/09/2013	235.00LB	435.26 LB	(location not assigned)	D14	P40053

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: ISOPROPYL **Product Name:** ISOPROPYL ALCOHOL 99%
Reference #: 000299

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348331	Purchase	01/16/2013	390.00 LB	390.00 LB	(location not assigned)	D14	P40172
755348506	Purchase	02/28/2013	390.00 LB	780.00 LB	(location not assigned)	D14	P40481
755348710	Purchase	05/07/2013	390.00 LB	1,170.00 LB	(location not assigned)	D14	P40820

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: KIMYA 3010 OIL **Product Name:** KIMYA 3010 OIL (.965)
Reference #: 000667

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347515	Purchase	06/15/2012	2,000.00 LB	2,000.00 LB	(location not assigned)	D14	P38807
755347732	Purchase	06/28/2012	2,000.00 LB	4,000.00 LB	(location not assigned)	D14	P38911
755347711	Purchase	07/03/2012	2,000.00 LB	6,000.00 LB	(location not assigned)	D14	P38911
755347720	Purchase	07/12/2012	2,000.00 LB	8,000.00 LB	(location not assigned)	D14	P39020
755347677	Purchase	08/09/2012	4,000.00 LB	12,000.00 LB	(location not assigned)	D14	P39208
755347827	Purchase	08/30/2012	4,000.00 LB	16,000.00 LB	(location not assigned)	D14	P39308
755347903	Purchase	10/09/2012	4,000.00 LB	20,000.00 LB	(location not assigned)	D14	P39540
755347996	Purchase	11/08/2012	2,000.00 LB	22,000.00 LB	(location not assigned)	D14	P39741
755348094	Purchase	12/05/2012	4,000.00 LB	26,000.00 LB	(location not assigned)	D14	P39898
755348471	Purchase	01/10/2013	2,000.00 LB	8,441.57 LB	(location not assigned)	D14	P40087
755348485	Purchase	02/08/2013	4,428.58 LB	12,870.15 LB	(location not assigned)	D14	P40294
755348678	Purchase	05/13/2013	4,428.58 LB	17,298.72 LB	(location not assigned)	D14	P40878
755348796	Purchase	06/11/2013	4,000.00 LB	21,298.72 LB	(location not assigned)	D14	P41043

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LAB OIL 100WT **Product Name:** LAB OIL 100WT
Reference #: 000681

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347641	Purchase	07/19/2012	429.91 LB	429.91 LB	(location not assigned)	D14	P39072
755347851	Purchase	09/11/2012	429.91 LB	859.82 LB	(location not assigned)	D14	P39380
755347983	Purchase	10/24/2012	429.91 LB	1,289.73 LB	(location not assigned)	D14	P39662
755348395	Purchase	01/10/2013	429.91 LB	1,451.22 LB	(location not assigned)	D14	P40089

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-SEAL 513 **Product Name:** LOCTITE DRI-SEAL 513 SEALANT
Reference #: 000476

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347980	Purchase	10/25/2012	253.07 LB	253.07 LB	(location not assigned)	D14	P39496

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: MACUVTNT **Product Name:** MACDERMID GL TORQUE'N TENSION UV FLUID
Reference #: 000493

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348602	Purchase	04/03/2013	1,459.00LB	1,459.00 LB	(location not assigned)	D14	P40659

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: MS6106A **Product Name:** WZ-100 TORQUE TENSION FLUID (1.09)
Reference #: 000464

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347507	Purchase	06/18/2012	86.00 LB	86.00 LB	(location not assigned)	E14	P38869
755347636	Purchase	07/20/2012	86.00 LB	172.00 LB	(location not assigned)	E14	P39059
755347865	Purchase	09/25/2012	86.00 LB	258.00 LB	(location not assigned)	E14	P39468
755347976	Purchase	10/30/2012	86.00 LB	344.00 LB	(location not assigned)	E14	P39575
755348139	Purchase	11/29/2012	86.00 LB	430.00 LB	(location not assigned)	E14	P39854
755348403	Purchase	01/04/2013	173.00 LB	173.00 LB	(location not assigned)	E14	P40051
755348347	Purchase	02/13/2013	173.00 LB	346.00 LB	(location not assigned)	E14	P40309
755348948	Purchase	05/24/2013	173.00 LB	519.00 LB	(location not assigned)	E14	P40950

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-ND593S BLUE **Product Name:** ND 593S BLUE MICROSPHERES (1.0)
Reference #: 000532

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347616	Purchase	06/29/2012	622.50 LB	622.50 LB	(location not assigned)	D14	P38978
755347759	Purchase	08/17/2012	415.00 LB	1,037.50 LB	(location not assigned)	D14	P39172
755348025	Purchase	11/02/2012	622.50 LB	1,660.00 LB	(location not assigned)	D14	P39699
755348060	Purchase	11/14/2012	600.00 LB	2,260.00 LB	(location not assigned)	D14	P39699
755348087	Purchase	12/06/2012	622.50 LB	2,882.50 LB	(location not assigned)	D14	P39896
755347378	Purchase	12/09/2012	415.00 LB	3,297.50 LB	(location not assigned)	D14	P37660
755348334	Purchase	01/15/2013	622.50 LB	1,153.18 LB	(location not assigned)	D14	P40054
755348802	Purchase	06/27/2013	256.00 LB	1,409.18 LB	(location not assigned)	D14	P41100

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: ND AA0095 **Product Name:** ND MICROSPHERES AA0095 ACTIVATOR (1.0)
Reference #: 000735

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347615	Purchase	06/29/2012	43.20 LB	43.20 LB	(location not assigned)	E14	P38978
755347756	Purchase	08/17/2012	57.60 LB	100.80 LB	(location not assigned)	E14	P39172
755347871	Purchase	09/17/2012	80.00 LB	180.80 LB	(location not assigned)	E14	P39314
755347895	Purchase	10/10/2012	50.40 LB	231.20 LB	(location not assigned)	E14	P39495
755348023	Purchase	11/02/2012	36.00 LB	267.20 LB	(location not assigned)	E14	P39699
755348085	Purchase	12/06/2012	28.80 LB	296.00 LB	(location not assigned)	E14	P39896
755347377	Purchase	12/09/2012	28.80 LB	324.80 LB	(location not assigned)	E14	P37660
755348332	Purchase	01/15/2013	36.00 LB	96.48 LB	(location not assigned)	E14	P40054
755348586	Purchase	03/01/2013	43.20 LB	139.68 LB	(location not assigned)	E14	P40478
755348656	Purchase	04/19/2013	43.20 LB	182.88 LB	(location not assigned)	E14	P40643
755348693	Purchase	05/10/2013	43.20 LB	226.08 LB	(location not assigned)	E14	P40835
755348903	Purchase	05/29/2013	28.80 LB	254.88 LB	(location not assigned)	E14	P40983
755348900	Purchase	06/27/2013	28.80 LB	283.68 LB	(location not assigned)	E14	P41100

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-3M 2353 BLUE **Product Name:** 2353 BLUE FASTENER ADHESIVE (1.0)
Reference #: 000293

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347611	Purchase	07/13/2012	1,043.00 LB	1,043.00 LB	(location not assigned)	D14	P38977
755347713	Purchase	07/16/2012	1,199.98 LB	2,242.98 LB	(location not assigned)	D14	P38977
755347689	Purchase	08/09/2012	959.99 LB	3,202.97 LB	(location not assigned)	D14	P39171
755347829	Purchase	09/04/2012	1,251.60 LB	4,454.57 LB	(location not assigned)	D14	P39309
755347897	Purchase	10/02/2012	1,043.00 LB	5,497.57 LB	(location not assigned)	D14	P39494
755347978	Purchase	10/30/2012	1,460.20 LB	6,957.77 LB	(location not assigned)	D14	P39687
755348096	Purchase	12/06/2012	1,251.60 LB	8,209.37 LB	(location not assigned)	D14	P39895
755348393	Purchase	01/09/2013	1,199.98 LB	1,884.19 LB	(location not assigned)	D14	P40053
755348292	Purchase	01/10/2013	1,043.00 LB	2,927.19 LB	(location not assigned)	D14	P40053
755348473	Purchase	02/06/2013	1,668.80 LB	4,595.99 LB	(location not assigned)	D14	P40285
755348587	Purchase	03/01/2013	166.00 LB	4,761.99 LB	(location not assigned)	D14	P40478
755348567	Purchase	03/06/2013	1,251.60 LB	6,013.59 LB	(location not assigned)	D14	P40477
755348716	Purchase	05/06/2013	5,006.40 LB	11,019.99 LB	(location not assigned)	D14	P40579
755348696	Purchase	05/10/2013	166.00 LB	11,185.99 LB	(location not assigned)	D14	P40835
755348773	Purchase	06/07/2013	2,399.97 LB	13,585.96 LB	(location not assigned)	D14	P41019

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: ND ACRYLIC 795 **Product Name:** ND MICROSPHERES ACRYLIC SERIES AA00795-796 (1.0)
Reference #: 000723

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347579	Purchase	06/04/2012	1,600.00 LB	1,600.00 LB	(location not assigned)	D14	P38698
755347614	Purchase	06/29/2012	600.00 LB	2,200.00 LB	(location not assigned)	D14	P38978
755347755	Purchase	08/17/2012	1,600.00 LB	3,800.00 LB	(location not assigned)	D14	P39172
755347894	Purchase	10/10/2012	700.00 LB	4,500.00 LB	(location not assigned)	D14	P39495
755348024	Purchase	11/02/2012	1,000.00 LB	5,500.00 LB	(location not assigned)	D14	P39699
755348086	Purchase	12/06/2012	800.00 LB	6,300.00 LB	(location not assigned)	D14	P39896
755348333	Purchase	01/15/2013	500.00 LB	1,340.00 LB	(location not assigned)	D14	P40054
755348585	Purchase	03/01/2013	600.00 LB	1,940.00 LB	(location not assigned)	D14	P40478
755348657	Purchase	04/19/2013	600.00 LB	2,540.00 LB	(location not assigned)	D14	p40643
755348694	Purchase	05/10/2013	600.00 LB	3,140.00 LB	(location not assigned)	D14	
755348695	Purchase	05/10/2013	600.00 LB	3,740.00 LB	(location not assigned)	D14	P40835
755348904	Purchase	05/29/2013	800.00 LB	4,540.00 LB	(location not assigned)	D14	P40983
755348901	Purchase	05/30/2013	169.00 LB	4,709.00 LB	(location not assigned)	D14	P40643
755348803	Purchase	06/27/2013	829.00 LB	5,538.00 LB	(location not assigned)	D14	P41103

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-ND ST-3-W **Product Name:** ND ST-3-W SEALANT WHITE (1.2)
Reference #: 000162

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347869	Purchase	09/17/2012	10.00 GA	10.00 GA	(location not assigned)	D14	P39314
755347896	Purchase	10/10/2012	20.00 GA	30.00 GA	(location not assigned)	D14	P39495

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: PRECOTE 30 **Product Name:** PRECOTE 30
Reference #: 000801

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348962	Purchase	02/26/2013	50.00 KG	50.00 KG	(location not assigned)	E14	P40424
755348966	Purchase	04/18/2013	25.00 KG	75.00 KG	(location not assigned)	E14	P40764
755348959	Purchase	05/06/2013	25.00 KG	100.00 KG	(location not assigned)	E14	P40858

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: PRECOTE 80 **Product Name:** PRECOTE 80
Reference #: 000802

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348963	Purchase	02/26/2013	165.35 LB	165.35 LB	(location not assigned)	E14	P40424
755348969	Purchase	03/07/2013	55.12 LB	220.46 LB	(location not assigned)	E14	P40501
755348967	Purchase	04/18/2013	100.00 LB	320.46 LB	(location not assigned)	E14	P40764
755348960	Purchase	05/06/2013	330.69 LB	651.16 LB	(location not assigned)	E14	P40858

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: PRECOTE 85 **Product Name:** PRECOTE 85
Reference #: 000803

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348964	Purchase	02/26/2013	75.00 KG	75.00 KG	(location not assigned)	E14	P40424
755348970	Purchase	03/07/2013	100.00 KG	175.00 KG	(location not assigned)	E14	P40501
755348965	Purchase	04/03/2013	100.00 KG	275.00 KG	(location not assigned)	E14	P40645
755348968	Purchase	04/18/2013	100.00 KG	375.00 KG	(location not assigned)	E14	P40764
755348961	Purchase	05/06/2013	50.00 KG	425.00 KG	(location not assigned)	E14	P40858

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: 452 **Product Name:** TEXACOTE 452 (1.12)
Reference #: 000486

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347629	Purchase	07/26/2012	55.00 GA	55.00 GA	(location not assigned)	E14	P39085
755347794	Purchase	09/12/2012	55.00 GA	110.00 GA	(location not assigned)	E14	P39379
755348128	Purchase	12/03/2012	55.00 GA	165.00 GA	(location not assigned)	E14	P39878
755348495	Purchase	02/06/2013	55.00 GA	110.00 GA	(location not assigned)	E14	P40274
755348635	Purchase	04/12/2013	55.00 GA	165.00 GA	(location not assigned)	E14	P40700
755348784	Purchase	06/07/2013	55.00 GA	220.00 GA	(location not assigned)	E14	P41029

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: MAC 187220 **Product Name:** TORQUE "N" TENSION 12 (1.04)
Reference #: 000652

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347565	Purchase	06/04/2012	500.00LB	500.00 LB	(location not assigned)	D14	P38800
755347779	Purchase	08/03/2012	1,500.00LB	2,000.00 LB	(location not assigned)	D14	P39177
755347832	Purchase	09/06/2012	1,000.00LB	3,000.00 LB	(location not assigned)	D14	P39346
755347931	Purchase	10/08/2012	500.00LB	3,500.00 LB	(location not assigned)	D14	P39556
755348035	Purchase	11/01/2012	500.00LB	4,000.00 LB	(location not assigned)	D14	P39710
755348113	Purchase	12/04/2012	1,000.00LB	5,000.00 LB	(location not assigned)	D14	P39891
755348317	Purchase	01/04/2013	500.00LB	1,324.39 LB	(location not assigned)	D14	P40070
755348329	Purchase	01/04/2013	500.00LB	1,824.39 LB	(location not assigned)	D14	P40070
755348421	Purchase	02/01/2013	500.00LB	2,324.39 LB	(location not assigned)	D14	P40275
755348503	Purchase	02/05/2013	1,000.00LB	3,324.39 LB	(location not assigned)	D14	P40275
755348549	Purchase	03/06/2013	1,000.00LB	4,324.39 LB	(location not assigned)	D14	P40505
755348600	Purchase	04/03/2013	500.00LB	4,824.39 LB	(location not assigned)	D14	P40659
755348603	Purchase	04/03/2013	500.00LB	5,324.39 LB	(location not assigned)	D14	P40659
755348913	Purchase	05/02/2013	1,000.00LB	6,324.39 LB	(location not assigned)	D14	P40849
755348719	Purchase	05/08/2013	2,000.00LB	8,324.39 LB	(location not assigned)	D14	P40796
755348723	Purchase	05/08/2013	1,500.00LB	9,824.39 LB	(location not assigned)	D14	P40796

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-TOLUENE **Product Name:** TOLUENE (.8595)
Reference #: 000204

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755348130	Purchase	12/03/2012	385.00 LB	385.00 LB	(location not assigned)	E14	P39894
755348391	Purchase	01/09/2013	385.00 LB	707.73 LB	(location not assigned)	E14	P40059
755348726	Purchase	05/01/2013	385.00 LB	1,092.73 LB	(location not assigned)	D14	P40820

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-VIBSEAL 516 **Product Name:** VIBRA-SEAL(R) 516
Reference #: 000203

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347590	Purchase	06/04/2012	251.94 LB	251.94 LB	(location not assigned)	D14	P38741
755348006	Purchase	11/02/2012	75.58 LB	327.52 LB	(location not assigned)	D14	P39700
755348103	Purchase	12/07/2012	100.77 LB	428.29 LB	(location not assigned)	D14	P39897
755348337	Purchase	02/18/2013	77.95 LB	329.88 LB	(location not assigned)	D14	P40286
755348944	Purchase	05/24/2013	207.85 LB	537.73 LB	(location not assigned)	D14	P40968

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Material Inventory Report System - INVENTORY Module

INV-001D

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: LS-DRI-LOC BPO **Product Name:** ACTIVATOR BPO CAPS (JAP)
Reference #: 000341

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347603	Purchase	07/02/2012	4.41 LB	4.41 LB	(location not assigned)	E14	P38980
755347810	Purchase	09/04/2012	4.41 LB	8.82 LB	(location not assigned)	E14	P39311
755348062	Purchase	10/02/2012	6.61 LB	15.43 LB	(location not assigned)	D14	P39496
755348063	Purchase	11/01/2012	4.41 LB	19.84 LB	(location not assigned)	E14	P39700
755348104	Purchase	12/07/2012	4.41 LB	24.25 LB	(location not assigned)	E14	P39897
755348338	Purchase	02/18/2013	6.61 LB	15.81 LB	(location not assigned)	E14	P40286
755348581	Purchase	03/04/2013	4.41 LB	20.22 LB	(location not assigned)	E14	P40479
755348945	Purchase	05/24/2013	8.82 LB	29.04 LB	(location not assigned)	E14	P40968
755348817	Purchase	06/19/2013	4.41 LB	33.45 LB	(location not assigned)	E14	P41102

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Material Inventory Report System - INVENTORY Module

INVENTORY TRANSACTION LISTING BY MATERIAL

transactions for one product - From 06/01/2012 To 06/30/2013.
Ordered by Product Code, Date, Location Code

Ajax Metal Processing, Inc.
4651 Bellevue Ave
Detroit, MI 48207

Product Code: ND ACRYLIC 795 **Product Name:** ND MICROSPHERES ACRYLIC SERIES AA00795-796 (1.0)
Reference #: 000723

Tran. ID #	Tran.Type	Tran.Date	Transaction Amount	Running ** Inventory Level	Location	Strg Code	PO # / Ref.#
755347579	Purchase	06/04/2012	1,600.00 LB	1,600.00 LB	(location not assigned)	D14	P38698
755347614	Purchase	06/29/2012	600.00 LB	2,200.00 LB	(location not assigned)	D14	P38978
755347755	Purchase	08/17/2012	1,600.00 LB	3,800.00 LB	(location not assigned)	D14	P39172
755347894	Purchase	10/10/2012	700.00 LB	4,500.00 LB	(location not assigned)	D14	P39495
755348024	Purchase	11/02/2012	1,000.00 LB	5,500.00 LB	(location not assigned)	D14	P39699
755348086	Purchase	12/06/2012	800.00 LB	6,300.00 LB	(location not assigned)	D14	P39896
755348333	Purchase	01/15/2013	500.00 LB	1,340.00 LB	(location not assigned)	D14	P40054
755348585	Purchase	03/01/2013	600.00 LB	1,940.00 LB	(location not assigned)	D14	P40478
755348657	Purchase	04/19/2013	600.00 LB	2,540.00 LB	(location not assigned)	D14	p40643
755348695	Purchase	05/10/2013	600.00 LB	3,140.00 LB	(location not assigned)	D14	P40835
755348904	Purchase	05/29/2013	800.00 LB	3,940.00 LB	(location not assigned)	D14	P40983
755348901	Purchase	05/30/2013	169.00 LB	4,109.00 LB	(location not assigned)	D14	P40643
755348803	Purchase	06/27/2013	829.00 LB	4,938.00 LB	(location not assigned)	D14	P41103

** Inventory levels reflect actual transactions and do not reflect assumed usage.
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Ajax Metal Processing
Detroit, MI

COATING USAGE (POUNDS)

Date	516 Vibra Seal 152 LT	Altraseal 6174	Altraseal 6351	Aqua Phos 187 Black Oil	Aqua Phos 193T Black Oil	Argent 6106-A	Butyl Cellosolve	Brulin 10B Nut Lube	Castrol Safety Film 639	DPI-24 Clear	DPI-24 Green
Density lbs/gal	9.55	9.18	9.20	9.18	9.18	9.08	7.53	8.01	8.42	7.42	7.63
VOC Content lbs/gal	0.29	1.50	1.69	1.80	1.50	0.00	7.53	1.34	0.37	2.75	6.09
% Solids vol%	97%	36%	39%	48%	49%	0%	0%	42%	0%	60%	12%
Jan-12	38	101	28	0	0	91	938	0	143	0	0
Feb-12	0	220	83	0	0	0	863	0	126	0	0
Mar-12	151	504	0	0	0	0	975	0	0	0	0
Apr-12	227	211	0	0	0	82	900	0	328	0	0
May-12	113	531	18	0	0	9	1,050	0	303	0	0
Jun-12	302	376	0	0	0	91	900	0	76	0	0
Jul-12	252	870	37	0	0	91	1,013	0	42	0	0
Aug-12	0	147	28	0	0	0	1,163	0	12	0	0
Sep-12	126	163	37	0	0	127	1,088	0	219	0	0
Oct-12	50	112	46	0	0	54	900	0	0	0	0
Nov-12	0	147	0	0	0	91	1,050	0	0	0	0
Dec-12	0	192	28	0	0	91	863	0	0	0	0
Jan-13	76	595	55	9	0	127	938	0	0	0	0
Feb-13	8	247	0	9	0	18	1,013	0	0	0	0
Mar-13	25	128	0	9	0	45	1,050	0	0	0	0
Apr-13	25	284	64	0	0	100	1,125	0	0	0	0
May-13	216	311	28	0	0	64	1,388	0	0	0	0
Jun-13	121	577	64	0	0	64	750	0	0	0	0

Ajax Metal Processing
Detroit, MI

COATING USAGE (POUNDS)

Date	DPI-24 Light Blue	DPI-24 Purple	DPI-24 White	DPI-24 Yellow	Dri Seal 513	Dri-Loc 201 SS#78	Dri-Loc 204 Adhesive Binder SS156	Dri-Loc 205 SS#179	Dri-Loc Activator P-2	Dri-Loc Adhesive 200 SS#74	Dri-Loc Adhesive 202 SS#75
Density lbs/gal	7.76	7.54	7.77	7.87	11.13	8.10	9.21	8.82	11.15	8.58	8.35
VOC Content lbs/gal	6.30	6.07	6.23	6.30	0.81	0.86	0.72	0.65	0.07	0.62	0.14
% Solids vol%	11%	13%	10%	11%	90%	89%	91%	93%	100%	93%	98%
Jan-12	18	0	0	0	0	209	292	13	56	170	0
Feb-12	27	0	0	0	0	240	230	112	82	240	0
Mar-12	5	0	0	0	0	400	490	8	80	240	0
Apr-12	23	0	0	0	0	400	20	0	59	280	0
May-12	9	0	0	0	0	820	680	120	70	360	0
Jun-12	5	0	0	0	0	60	0	0	136	200	0
Jul-12	14	0	0	0	0	280	160	40	80	280	0
Aug-12	0	0	0	0	0	180	160	120	76	360	0
Sep-12	0	0	0	0	0	140	40	20	50	160	0
Oct-12	0	0	0	0	13	140	280	20	66	200	20
Nov-12	0	0	0	0	70	220	120	0	63	240	0
Dec-12	0	0	0	0	113	20	0	30	34	127	0
Jan-13	0	0	0	0	107	300	80	50	8	313	0
Feb-13	0	0	0	0	0	80	160	100	36	240	0
Mar-13	0	0	0	0	0	500	0	20	50	360	0
Apr-13	0	0	0	0	0	240	120	40	21	320	0
May-13	0	0	0	0	0	820	460	40	102	320	0
Jun-13	0	0	0	0	0	260	180	40	79	420	0

Ajax Metal Processing
Detroit, MI

COATING USAGE (POUNDS)

Date	DuralonJM Pink, 1-A-6	EPC-1881/Ajax Blue Ptfe Modified Epoxy WB	EPC 2364 Yellow	Isopropyl Acetate	Kimya 3010 Oil	Lab Oil 100	Loctite 2045 Threadlocker, Dri-Loc Part A	Loctite Activator P-3	MM-140	ND Microspheres #593SBHV (Blue)	ND Microspheres AA0095 Activator
Density lbs/gal	11.00	9.14	9.21	7.25	8.05	7.76	8.88	8.35	7.92	8.85	11.14
VOC Content lbs/gal	0.11	3.30	2.62	7.25	0.40	0.78	0.01	0.00	6.10	3.08	0.00
% Solids vol%	100%	22%	0%	0%	0%	0%	100%	100%	10%	58%	100%
Jan-12	288	33	0		844	345	480	3	21	966	34
Feb-12	255	0	0		1,327	330	440	4	8	350	30
Mar-12	510	0	0		1,327	375	560	2	12	725	51
Apr-12	199	0	0		1,327	0	0	0	25	425	27
May-12	180	0	0		1,327	158	1,180	1	67	491	66
Jun-12	469	17	0		1,327	218	480	2	4	383	3
Jul-12	428	0	0		1,327	390	940	0	8	491	38
Aug-12	395	0	0		1,327	60	600	2	0	350	92
Sep-12	430	0	0		884	263	640	0	0	666	0
Oct-12	321	8	9		1,327	263	540	2	5	900	31
Nov-12	360	0	0		884	158	900	0	4	466	9
Dec-12	150	0	0		884	195	488	0	4	450	23
Jan-13	361	8	0	5	884	225	1,192	2	67	541	14
Feb-13	410	0	0	0	1,327	315	520	1	17	292	32
Mar-13	400	25	0	45	1,327	233	60	2	0	42	24
Apr-13	429	25	0	325	1,327	345	270	3	0	167	33
May-13	264	50	0	800	1,327	278	580	0	0	67	20
Jun-13	420	0	0	535	1,327	630	480	3	0	167	47

Ajax Metal Processing
Detroit, MI

COATING USAGE (POUNDS)

Date	ND Microspheres AA0795 (Yellow)	ND ST-3-W Sealant (White Sealant)	Preapplied Thread Sealant (Dri-Loc STS)	Precote 30	Precote 80	Precote 85	Scotch-Grip Brand Fastener Adhesive 2353 (Blue)	Scotch-Grip Brand Fastener Adhesive EC2510 (Orange)	Scotch-Grip Brand Fastener Adhesive EC4844 (Yellow)	Scotch-Grip Brand Thread Sealant 4291	Texacote 452
Density lbs/gal	8.77	10.01	8.84	10.01	10.01	10.01	8.34	8.34	8.34	10.02	9.34
VOC Content lbs/gal	0.29	0.03	0.13	2.00	2.50	2.50	3.09	4.01	3.17	0.20	1.87
% Solids vol%	53%	61%	98%	73%	67%	67%	65%	50%	65%	59%	38%
Jan-12	1,360	76	256				850	791	50	0	189
Feb-12	1,200	10	840				1,066	491	100	0	331
Mar-12	840	0	720				833	417	58	0	0
Apr-12	1,080	0	320				2,191	1,483	142	0	520
May-12	1,640	10	1,240				858	150	0	0	0
Jun-12	1,120	0	120				1,383	691	67	0	170
Jul-12	1,520	67	240				1,166	500	142	0	302
Aug-12	2,080	0	920				1,758	708	150	0	208
Sep-12	200	19	400				1,041	908	67	70	293
Oct-12	1,640	267	460				1,241	441	25	0	66
Nov-12	360	0	160				1,125	600	108	0	340
Dec-12	1,760	0	124				966	450	67	0	180
Jan-13	1,787	10	356	0	0	0	1,183	433	42	0	236
Feb-13	32	19	700	0	0	0	1,266	675	33	0	142
Mar-13	1,194	229	360	0	0	25	1,874	733	100	0	756
Apr-13	1,203	0	440	25	88	55	2,374	791	75	0	170
May-13	1,190	48	860	75	262	350	2,232	933	42	0	255
Jun-13	1,207	57	820	70	235	215	1,691	716	133	0	189

Ajax Metal Processing
Detroit, MI

COATING USAGE (POUNDS)

Date	TNT 12	TNT 15	TNT UV Fluid	Toluene
Density lbs/gal	8.67	8.66	8.42	7.26
VOC Content lbs/gal	0.26	0.26	0.00	7.26
% Solids vol%	25%	18%	0%	0%
Jan-12	442	2,733	3,103	36
Feb-12	398	1,713	1,060	36
Mar-12	710	952	463	0
Apr-12	43	1,540	3,507	33
May-12	260	2,405	1,556	146
Jun-12	312	1,964	1,741	0
Jul-12	667	1,791	1,968	0
Aug-12	606	1,903	1,589	143
Sep-12	736	1,332	1,547	0
Oct-12	320	1,600	1,480	72
Nov-12	1,204	1,842	1,758	286
Dec-12	788	1,038	1,598	57
Jan-13	1,100	2,033	606	236
Feb-13	797	1,332	1,791	143
Mar-13	797	1,471	1,716	72
Apr-13	598	1,877	2,187	72
May-13	520	2,180	1,556	200
Jun-13	4,096	1,168	1,690	107

Plant-Wide HAP Emissions Summary

Ajax Metal Processing
Detroit, MI

	Total HAPS			Volume Solids		HAP/Solid	
Month	Emissions (tons)	12-Month Rolling VOC (tons/yr)	In Compliance <22.5 tons per 12-month rolling (yes/no)	Solids (gal)	12-Month Rolling Solids (gal/yr)	12-Month Rolling Lbs HAP/Gal Solid	In Compliance <2.6 lbs HAP/gal Solid per 12-month rolling (yes/no)
Jan-12	0.6	6.3	Yes	543.6	6,387.5	2.0	Yes
Feb-12	0.4	6.3	Yes	553.3	6,433.7	2.0	Yes
Mar-12	0.4	5.9	Yes	588.8	6,249.3	1.9	Yes
Apr-12	0.9	6.5	Yes	587.9	6,435.7	2.0	Yes
May-12	0.4	6.5	Yes	807.8	6,817.5	1.9	Yes
Jun-12	0.5	6.5	Yes	500.7	6,742.3	1.9	Yes
Jul-12	0.5	6.5	Yes	653.1	6,891.4	1.9	Yes
Aug-12	0.7	6.5	Yes	721.0	7,010.4	1.8	Yes
Sep-12	0.5	6.3	Yes	481.9	6,912.4	1.8	Yes
Oct-12	0.6	6.5	Yes	576.6	6,892.2	1.9	Yes
Nov-12	0.6	6.7	Yes	503.0	6,957.8	1.9	Yes
Dec-12	0.4	6.7	Yes	419.5	6,937.1	1.9	Yes
Jan-13	0.6	6.7	Yes	681.3	7,074.8	1.9	Yes
Feb-13	0.5	6.7	Yes	472.7	6,994.1	1.9	Yes
Mar-13	0.6	7.0	Yes	567.7	6,973.1	2.0	Yes
Apr-13	0.7	6.8	Yes	614.7	6,999.9	1.9	Yes
May-13	0.9	7.2	Yes	836.7	7,028.8	2.1	Yes
Jun-13	0.7	7.4	Yes	786.5	7,314.8	2.0	Yes

Plant-Wide HAP Emissions Summary

Ajax Metal Processir
Detroit, MI

	formaldehyde 50-00-0		methanol 67-56-1		styrene 100-42-5		epichlorohydrin 106-89-8		methyl isobutyl ketone 108-10-1		toluene 108-88-3		triethylamine 121-44-8		xylene 1330-20-7		glycol ethers	
Month	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)	Emissions (tons)	12-Month Rolling VOC (tons/yr)
Jan-12	3.9E-03	0.0	4.5E-04	0.0	0.0E+00	0.0	4.8E-07	0.0	3.6E-03	0.0	5.4E-01	5.9	0.0E+00	0.0	0.0E+00	0.0	3.1E-02	0.3
Feb-12	4.1E-03	0.0	6.8E-04	0.0	0.0E+00	0.0	1.8E-07	0.0	1.9E-03	0.0	4.1E-01	5.9	0.0E+00	0.0	0.0E+00	0.0	3.5E-02	0.3
Mar-12	5.2E-03	0.0	1.3E-04	0.0	0.0E+00	0.0	3.6E-07	0.0	1.9E-03	0.0	4.0E-01	5.5	0.0E+00	0.0	0.0E+00	0.0	1.4E-02	0.3
Apr-12	2.6E-03	0.0	5.8E-04	0.0	0.0E+00	0.0	2.1E-07	0.0	4.3E-03	0.0	8.5E-01	6.1	0.0E+00	0.0	0.0E+00	0.0	3.9E-02	0.3
May-12	1.0E-02	0.1	2.3E-04	0.0	0.0E+00	0.0	2.5E-07	0.0	1.0E-02	0.0	3.6E-01	6.1	0.0E+00	0.0	0.0E+00	0.0	2.8E-02	0.3
Jun-12	3.6E-03	0.1	1.3E-04	0.0	0.0E+00	0.0	1.9E-07	0.0	7.3E-04	0.0	4.9E-01	6.1	0.0E+00	0.0	0.0E+00	0.0	2.5E-02	0.3
Jul-12	6.9E-03	0.1	3.5E-04	0.0	0.0E+00	0.0	2.5E-07	0.0	1.6E-03	0.0	4.5E-01	6.1	0.0E+00	0.0	0.0E+00	0.0	3.8E-02	0.3
Aug-12	5.3E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	1.8E-07	0.0	0.0E+00	0.0	6.4E-01	6.0	0.0E+00	0.0	0.0E+00	0.0	4.4E-02	0.4
Sep-12	4.4E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	3.3E-07	0.0	0.0E+00	0.0	5.3E-01	5.9	0.0E+00	0.0	0.0E+00	0.0	1.6E-02	0.4
Oct-12	4.3E-03	0.1	0.0E+00	0.0	6.5E-05	0.0	4.5E-07	0.0	7.5E-04	0.0	5.4E-01	6.0	0.0E+00	0.0	0.0E+00	0.0	3.1E-02	0.3
Nov-12	6.3E-03	0.1	0.0E+00	0.0	3.5E-04	0.0	2.3E-07	0.0	6.0E-04	0.0	5.9E-01	6.2	0.0E+00	0.0	0.0E+00	0.0	1.9E-02	0.3
Dec-12	3.1E-03	0.1	0.0E+00	0.0	5.7E-04	0.0	2.3E-07	0.0	6.0E-04	0.0	4.0E-01	6.2	0.0E+00	0.0	0.0E+00	0.0	3.7E-02	0.4
Jan-13	8.4E-03	0.1	0.0E+00	0.0	5.4E-04	0.0	2.7E-07	0.0	1.0E-02	0.0	5.4E-01	6.2	6.8E-05	0.0	0.0E+00	0.0	4.1E-02	0.4
Feb-13	4.0E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	1.5E-07	0.0	2.6E-03	0.0	5.1E-01	6.3	6.8E-05	0.0	0.0E+00	0.0	6.4E-03	0.3
Mar-13	3.6E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	2.1E-08	0.0	0.0E+00	0.0	5.7E-01	6.5	6.8E-05	0.0	0.0E+00	0.0	5.0E-02	0.4
Apr-13	3.7E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	8.4E-08	0.0	0.0E+00	0.0	7.1E-01	6.3	0.0E+00	0.0	0.0E+00	0.0	2.8E-02	0.4
May-13	6.9E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	3.4E-08	0.0	0.0E+00	0.0	8.1E-01	6.8	0.0E+00	0.0	0.0E+00	0.0	3.1E-02	0.4
Jun-13	5.3E-03	0.1	0.0E+00	0.0	0.0E+00	0.0	8.4E-08	0.0	0.0E+00	0.0	6.4E-01	6.9	0.0E+00	0.0	0.0E+00	0.0	2.9E-02	0.4

Remote Acid Scrubber pH Log January 2013 - June 2013

Date	Approximate Time	PL 1 Zn/Ni #1	PL 3 Zinc 2	PL 11 Zn/Ni #2	PL 12 Zinc 5	PL 6 Zinc 4	PL 4 Tin	PL 8 Phos 2	PL 7 Phos 1	Comments
		EUPL1	EUPL3	EUPL11	EUPL12	EUPL6	EUPL4			
1/2/2013	2:00pm - 2:30pm	7.39	7.45	7.40	7.27	7.11	7.50	7.27	7.33	
1/11/2013	10:30a.m. - 11:00a.m.	7.16	7.03	7.15	6.98	7.00	7.10	6.88	6.79	
1/21/2013	10:30a.m. - 11:00a.m.	7.02	7.06	7.11	7.10	7.07	7.13	7.00	7.09	
2/4/2013	9:00a.m. - 9:30a.m.	7.17	7.16	7.34	7.00	7.04	7.17	7.08	7.22	
2/15/2013	1:00p.m. - 1:30p.m.	7.06	7.18	7.19	7.07	6.98	7.20	7.15	7.09	
2/23/2013	10:00a.m. - 10:30a.m.	7.12	7.09	7.06	7.12	6.56	6.92	6.94	7.14	
3/1/2013	10:30a.m. - 11:00a.m.	7.15	7.14	7.20	7.15	7.00	7.20	7.12	7.18	
3/9/2013	9:00a.m. - 9:30a.m.	7.02	7.08	7.23	7.20	6.88	7.19	7.25	7.26	
3/22/2013	2:00pm - 2:30pm	7.05	7.17	6.85	7.30	7.15	7.16	6.52	7.10	
4/1/2013	9:00a.m. - 9:30a.m.	7.02	7.09	7.13	7.27	6.28	7.06	6.24	7.08	
4/8/2013	10:00a.m. - 10:30a.m.	7.05	7.13	7.18	7.10	6.71	7.21	6.96	7.11	
4/15/2013	10:30a.m. - 11:00a.m.	7.09	7.21	7.16	7.12	6.55	7.16	6.76	7.09	
4/27/2013	10:30a.m. - 11:00a.m.	7.00	7.15	7.09	7.20	7.08	7.18	6.98	6.87	
5/4/2013	10:00a.m. - 10:30a.m.	6.95	6.87	6.56	7.01	6.90	6.95	6.54	6.41	
5/11/2013	11:00a.m. - 11:30a.m.	6.72	6.48	6.04	6.67	6.30	6.59	6.34	6.69	
5/18/2013	9:00a.m. - 9:30a.m.	6.57	6.56	6.30	6.64	5.82	6.63	6.43	6.41	
5/25/2013	9:30a.m. - 10:30a.m.	6.42	6.65	6.56	6.61	5.34	6.67	6.51	6.12	
6/5/2013	10:00a.m. - 10:30a.m.	6.58	6.71	6.97	6.77	6.08	7.05	6.49	6.88	
6/21/2013	9:00a.m. - 9:30a.m.	6.74	6.76	6.87	6.90	6.37	6.56	5.81	6.47	
Maximum:		7.39	7.45	7.40	7.30	7.15	7.50	7.27	7.33	
Average:		6.96	7.00	6.97	7.03	6.64	7.03	6.75	6.91	
Minimum:		6.42	6.48	6.04	6.61	5.34	6.56	5.81	6.12	
Range:		0.97	0.97	1.36	0.69	1.81	0.94	1.46	1.21	
Average of all lines: 6.91										

= *Line down no water / circulation*

= *Comments / maintenance*

= *Corrections*

HCl Pickle Tank Conditions

Tin Zinc (23I)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-Jan	97		100	30	30	29
3-Jan	93			29		
4-Jan	99	99		28	33	
7-Jan	99	99		33	33	
8-Jan	100			33		
9-Jan	100	99		30	30	
11-Jan		99			30	
14-Jan	97	98		29	30	
15-Jan	98	100		27	26	
16-Jan	100			27		
17-Jan	99			24	22	
18-Jan			100			34
21-Jan	99			32		
22-Jan	100			32		
23-Jan	98	98		30	28	
24-Jan	99			29		
25-Jan	98	98		29	27	
28-Jan	98		100	25		38
29-Jan	99			37		
30-Jan	99	99		34	30	
31-Jan	98	97	99	32	30	29
Max.	100	100	100	37	33	38
Avg.	99	99	100	30	29	34
Min	93	97	99	24	22	29

Max. Temperature (^{0}F)	100
AVG. Temperature (^{0}F)	99
Min. Temperature (^{0}F)	93
Max. Concentration (%)	38
Avg. Concentration (%)	31
Min. Concentration (%)	22

HCl Pickle Tank Conditions

Tin Zinc (23l)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
4-Feb			97			36
5-Feb	100			32		
6-Feb	98			30		
7-Feb	99			29		
8-Feb	98	99		29	28	
11-Feb	98	99		27	25	
12-Feb	98			37		
13-Feb	96			33		
14-Feb	98	99	99	32	30	30
15-Feb			80			30
18-Feb			101			29
19-Feb	95	95		39	34	
20-Feb	93	100		35	30	
21-Feb	101	99		32	30	
22-Feb		99			32	
26-Feb	98		100	28		27
27-Feb	99	99	100	35	30	30
28-Feb	98		100	31		36
Max.	101	100	101	39	34	36
Avg.	98	99	97	32	30	31
Min	93	95	80	27	25	27

Max. Temperature (^{0}F)	101
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	80
Max. Concentration (%)	39
Avg. Concentration (%)	31
Min. Concentration (%)	25

HCl Pickle Tank Conditions

Tin Zinc (23I)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar	99			39		
4-Mar		100	100		40	40
6-Mar	98		100	37		36
7-Mar	99			34		
8-Mar			99			33
11-Mar	101	100		32	30	
12-Mar	99			34		
13-Mar	98	100		30	30	
14-Mar	100		106	32		29
15-Mar	99			27		
18-Mar	98			27		
19-Mar	100	100		27	24	
20-Mar	100			35		
21-Mar	98			33		
22-Mar	98			34		
25-Mar	93	98		33	32	
26-Mar		100			30	
27-Mar	99	99		29	28	
28-Mar	100			26		
Max.	101	100	106	39	40	40
Avg.	99	100	101	32	31	35
Min	93	98	99	26	24	29

Max. Temperature (^{0}F)	106
AVG. Temperature (^{0}F)	100
Min. Temperature (^{0}F)	93
Max. Concentration (%)	40
Avg. Concentration (%)	32
Min. Concentration (%)	24

HCl Pickle Tank Conditions

Tin Zinc (23I)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	99			36		
2-Apr	98			40		
3-Apr	99	100		40	40	
4-Apr	99	100		38	37	
5-Apr	99	100	99	33	34	36
6-Apr	98	99		33	30	
8-Apr	100			31		
9-Apr	99	99	99	30	30	30
10-Apr	99	100		35	35	
11-Apr	98	99	99	37	37	35
12-Apr			100			
13-Apr	100	100		34	31	
16-Apr	99			31		
18-Apr	100			31		
19-Apr	100			29		
21-Apr			99			30
22-Apr	100		101	27	28	
23-Apr	101			40		
24-Apr	98			41		
25-Apr	99	100		39	35	
26-Apr	99	100		34		
29-Apr			100			35
Max.	101	100	101	41	40	36
Avg.	99	100	100	35	34	33
Min	98	99	99	27	28	30

Max. Temperature (^{0}F)	101
AVG. Temperature (^{0}F)	99
Min. Temperature (^{0}F)	98
Max. Concentration (%)	41
Avg. Concentration (%)	34
Min. Concentration (%)	27

HCl Pickle Tank Conditions

Tin Zinc (23I)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-May	100			33		
2-May	89			31		
3-May	100			26		
6-May	100			27		
7-May	99			28		
8-May	101			27		
9-May	99	99		31	27	
10-May	99			27		
13-May	100			29		
15-May	99	99		28	34	
16-May	100			32		
17-May	99	99	100	34	31	31
18-May	99			30		
20-May	99			32		
21-May		99	101		31	29
22-May	99	100		36	33	
23-May	100			35		
24-May	101		99	32		
25-May	99	99		30	30	
28-May	99	99		32	30	
29-May	100	100		30	30	
31-May	101			28		
Max.	101	100	101	36	34	31
Avg.	99	99	100	30	31	30
Min	89	99	99	26	27	29

Max. Temperature (^{0}F)	101
AVG. Temperature (^{0}F)	99
Min. Temperature (^{0}F)	89
Max. Concentration (%)	36
Avg. Concentration (%)	30
Min. Concentration (%)	26

HCl Pickle Tank Conditions

Tin Zinc (23I)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
3-Jun	99	100		39	33	
4-Jun	101	100		30	29	
5-Jun	100	100		40	40	
6-Jun	101			41		
7-Jun	99	100		40	40	
10-Jun	102	100		39	40	
11-Jun	100	100		38	35	
12-Jun			99			34
13-Jun	101			34		
14-Jun	100			33		
17-Jun	91			34		
18-Jun	100	99		31	28	
19-Jun	100	99		34	30	
20-Jun	100			31		
21-Jun	100			29		
22-Jun	99			29		
24-Jun		100			30	
25-Jun	100		92	28		28
26-Jun	100			35		
27-Jun	100			38		
28-Jun	100	98		34	33	
29-Jun	101			30		
Max.	102	100	99	41	40	34
Avg.	100	100	96	34	34	31
Min	91	98	92	28	28	28

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	91
Max. Concentration (%)	41
Avg. Concentration (%)	33
Min. Concentration (%)	28

HCl Pickle Tank Conditions

Zinc 2 (23B)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-Jan	80	88		34	41	
3-Jan	83	97	98	30	34	31
4-Jan	98			28		
5-Jan	97	94		37	33	
7-Jan			98			29
8-Jan	99		100	26		35
10-Jan	99	94	99	31	25	37
11-Jan	100	95	99	31	29	37
14-Jan	99		103	38		40
15-Jan	99	99		35	30	
17-Jan	98	99	100	28	28	38
18-Jan	99	98		35	31	
22-Jan	101	94		29	26	
24-Jan		100	97		20	33
29-Jan	99	96	98	31	27	24
30-Jan	99	99	99	30	30	29
31-Jan	99			35		
Max.	101	100	103	38	34	40
Avg.	98	97	99	32	28	33
Min	83	94	97	26	20	24

Max. Temperature (^{0}F)	103
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	83
Max. Concentration (%)	40
Avg. Concentration (%)	31
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc 2 (23B)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Feb	100	100	94	37	33	32
2-Feb	99			34		
4-Feb	99			30		
5-Feb		92	95		30	27
6-Feb	98	98	99	35	28	40
7-Feb	98	90		39		
9-Feb	102			34		
11-Feb		98	91		30	35
12-Feb			94			31
13-Feb	95	94	94	33	29	40
14-Feb	99	98	100	29	30	40
15-Feb	100	97	99	40	40	38
16-Feb	99	99		37	33	
18-Feb		85	90	40	37	35
19-Feb	95	95	99	40	40	34
20-Feb	99			27		
21-Feb	101	94	94	29	26	36
24-Feb	99			30		
25-Feb			96			32
26-Feb	88	86		28	27	
27-Feb	104	94	99	39	38	40
28-Feb	100	98		40	40	
Max.	104	100	100	40	40	40
Avg.	99	95	96	35	33	35
Min	88	85	90	27	26	27

Max. Temperature (^{0}F)	104
AVG. Temperature (^{0}F)	96
Min. Temperature (^{0}F)	85
Max. Concentration (%)	40
Avg. Concentration (%)	34
Min. Concentration (%)	26

HCl Pickle Tank Conditions

Zinc 2 (23B)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar		99	99		35	33
2-Mar	100			27		
4-Mar	87	88		43	24	
5-Mar	90			35		
6-Mar	98	98	98	34	30	40
7-Mar	102	99	99	34	33	33
8-Mar	98			27		
10-Mar			88			31
11-Mar	98	108	98	25	22	39
12-Mar	100	96	97	35	43	39
13-Mar	98	95	94	30	30	34
14-Mar	96	95		33	33	
18-Mar	101	95	87	30	26	30
19-Mar	99	95	99	43	40	40
20-Mar	96		96	37		37
21-Mar	95			31		
25-Mar	79	86		35	40	
26-Mar	94	94	99	34	32	31
27-Mar			98			40
28-Mar	100			36		
Max.	102	108	99	43	43	40
Avg.	96	96	96	33	32	36
Min	79	86	87	25	22	30

Max. Temperature (^{0}F)	108
AVG. Temperature (^{0}F)	96
Min. Temperature (^{0}F)	79
Max. Concentration (%)	43
Avg. Concentration (%)	34
Min. Concentration (%)	22

HCl Pickle Tank Conditions

Zinc 2 (23B)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	99	92	94	37	34	31
2-Apr	91	92	98	26	30	40
3-Apr	99	99	99	40	35	38
4-Apr	98	98	96	32	29	40
5-Apr	97	97	97	37	36	34
6-Apr	98	98	99	39	32	40
8-Apr	98			43		
9-Apr			98			45
10-Apr	97	98	98	38	34	32
11-Apr	99			34		
13-Apr	97	98		33	28	
17-Apr	98	98	98	33	25	36
18-Apr	99			29		
18-Apr	100	98	98	29	25	
20-Apr	100	99		30	29	
23-Apr	100	96		35	35	
25-Apr	98	98	99	31	29	31
26-Apr	99	99		38	31	
29-Apr		93		31		
Max.	100	99	99	43	36	45
Avg.	98	97	98	34	31	37
Min	91	92	94	26	25	31

Max. Temperature (^{0}F)	100
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	91
Max. Concentration (%)	45
Avg. Concentration (%)	34
Min. Concentration (%)	25

HCl Pickle Tank Conditions

Zinc 2 (23B)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-May		102	101		28	33
3-May	101	100	99	27	24	33
4-May		99			25	
7-May	98	99	99	31	25	35
8-May	99	99	98	33	30	40
9-May	100		98	37		37
10-May	99	99	98	32	22	40
13-May	99			37		
14-May	100	99	99	36	33	40
15-May	98	99	99	40	35	36
16-May	98	99	99	36	35	37
17-May	98	96	101	30	28	40
18-May	99	99	101	35	34	32
21-May	100			29		
22-May			100			40
23-May	100		102	40		40
24-May	99	99	100	40	40	34
25-May	98			29		
28-May		95	99		32	29
29-May	101	101		23	29	
30-May			100			39
31-May	101			34		
Max.	101	102	102	40	40	40
Avg.	99	99	100	33	30	37
Min	98	95	98	23	22	29

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	99
Min. Temperature (^{0}F)	95
Max. Concentration (%)	40
Avg. Concentration (%)	33
Min. Concentration (%)	22

HCl Pickle Tank Conditions

Zinc 2 (23B)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
4-Jun	100	100	100	30	28	40
5-Jun	101	101		34	33	
6-Jun	94	95		31	28	
7-Jun	100	98		27	23	
10-Jun	98			39		
11-Jun	98	100	103	36	33	40
12-Jun	100			36		
13-Jun	101	100	100	35	34	32
17-Jun	98			28		
18-Jun	98			27		
19-Jun	91			25		
20-Jun	98	99		25	20	
21-Jun	98			34		
22-Jun	101			26		
24-Jun	100			35		
25-Jun	99	99		33	28	
26-Jun	100	107	110	36	31	28
27-Jun	101	104	105	37	33	32
28-Jun	104	100		26	24	
29-Jun	102		101	37		36
Max.	104	107	110	39	34	40
Avg.	99	100	103	32	29	35
Min	91	95	100	25	20	28

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	101
Min. Temperature (^{0}F)	91
Max. Concentration (%)	40
Avg. Concentration (%)	32
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc 4 (23D)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-Jan	109	98	98	40	34	38
3-Jan	93	97	104	34	31	36
4-Jan	106	102		33	30	
5-Jan	99			24		
7-Jan	109	99		40	31	
8-Jan	108	101		34	38	
9-Jan	98	99		37	32	
10-Jan	103			37		
11-Jan	101	99		33	38	
14-Jan	109	99		37	38	
15-Jan	103	99	100	30	35	28
16-Jan	100			21		38
17-Jan	109	108		37	37	
18-Jan	103	100		33	39	
19-Jan	109	102		36	34	
21-Jan	98	98		37	34	
22-Jan	101	100		32	26	
23-Jan	100	98		33	33	
24-Jan	108	101	106	28	25	32
25-Jan	108	102	93	38	38	40
26-Jan	97	102		39	34	
28-Jan	98	99		34	30	
29-Jan	110	100	97	35	30	24
30-Jan	101	92		33	30	
31-Jan	110			36		
Max.	110	108	106	40	39	40
Avg.	103	100	100	34	33	33
Min	93	92	93	21	25	24

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	101
Min. Temperature (^{0}F)	92
Max. Concentration (%)	40
Avg. Concentration (%)	33
Min. Concentration (%)	21

HCl Pickle Tank Conditions

Zinc 4 (23D)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Feb	108	93		32	38	
2-Feb		99			38	
4-Feb	106			36		
5-Feb	106	93		32	40	
6-Feb		99	96		40	31
7-Feb	109	98	106	41	40	35
8-Feb	105		60	37		35
9-Feb	98	98		41	38	
11-Feb			106			33
12-Feb		109	105		21	38
13-Feb	110	108		35	32	
14-Feb		102			42	
15-Feb	101	101		36	34	
16-Feb	109			30		
18-Feb		98			42	
19-Feb	104	105		35	30	
20-Feb	107	106		42	36	
21-Feb	109	107		33	40	
22-Feb	109	109	107	42	40	32
25-Feb	101			33		
26-Feb	106			40		
27-Feb			107			38
28-Feb	109	104		34	28	
Max.	110	109	107	42	42	38
Avg.	106	102	98	36	36	35
Min	98	93	60	30	21	31

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	102
Min. Temperature (^{0}F)	60
Max. Concentration (%)	42
Avg. Concentration (%)	36
Min. Concentration (%)	21

HCl Pickle Tank Conditions

Zinc 4 (23D)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar		109	102		40	35
4-Mar	100			40		
5-Mar	110			43		
6-Mar		108			36	
7-Mar	109	99	104	31	29	40
8-Mar		106			37	
11-Mar		98			35	
12-Mar		101			34	
13-Mar	103			37		
14-Mar	101	99		35	35	
15-Mar	100			34		
18-Mar	110	98		35	33	40
19-Mar	106		110	38		37
20-Mar	110		108	36		38
21-Mar	105		107	33		32
22-Mar		108			30	
24-Mar			102			40
25-Mar						40
26-Mar	108			36		
27-Mar	104		109	36		34
28-Mar	105			38		
Max.	110	109	110	43	40	40
Avg.	105	103	106	36	34	37
Min	100	98	102	31	29	32

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	105
Min. Temperature (^{0}F)	98
Max. Concentration (%)	43
Avg. Concentration (%)	36
Min. Concentration (%)	29

HCl Pickle Tank Conditions

Zinc 4 (23D)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	108	101		41	40	
2-Apr	108	100		38	34	
3-Apr	104			42		
4-Apr	101		109	40		36
5-Apr	106			36		
8-Apr	104			34		
9-Apr	96	99		40	37	
10-Apr	105	108		40	42	
11-Apr	101	98		37	40	
12-Apr	99			44		
15-Apr	108	106		42	40	
16-Apr	106	98		40	39	
17-Apr	109			40		
18-Apr	104	106		40	40	
20-Apr	103	106		43	40	
22-Apr	109	104		38	38	
23-Apr	108			34		
24-Apr	111	96		32	33	
25-Apr	109	110		40	40	
28-Apr			107			39
29-Apr	109	108		33	20	
30-Apr	104			39		
Max.	111	110	109	44	42	39
Avg.	105	103	108	39	37	38
Min	96	96	107	32	20	36

Max. Temperature (^{0}F)	111
AVG. Temperature (^{0}F)	105
Min. Temperature (^{0}F)	96
Max. Concentration (%)	44
Avg. Concentration (%)	38
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc 4 (23D)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-May	105	104		36	35	
3-May	109			31		
4-May	110			29		
6-May	100	102		43	37	
7-May	108			40		
8-May	105			36		
9-May	108			33		
10-May	110			28		
11-May	106			28		
13-May	90	107		38	36	
14-May	101		109	34		35
15-May	106			41		
16-May	105	102		41	39	
17-May	109			34		
18-May	107			48		
20-May	107	109		43	40	
21-May	108			33		
22-May	110			30		
23-May	109	109		40	40	
24-May	110	108		39	40	
25-May		110			38	
28-May	105			39		
29-May	109			36		
30-May	108			35		
Max.	110	110	109	48	40	35
Avg.	106	106	109	36	38	35
Min	90	102	109	28	35	35

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	107
Min. Temperature (^{0}F)	90
Max. Concentration (%)	48
Avg. Concentration (%)	36
Min. Concentration (%)	28

HCl Pickle Tank Conditions

Zinc 4 (23D)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Jun	109	108		34	31	
3-Jun	109	106		40	35	
4-Jun	109			29		
5-Jun	109		110	28		39
6-Jun	104			35		
7-Jun	109			37		
8-Jun	108	107		31	42	
10-Jun	109	108		40	40	
11-Jun	105			37		
12-Jun	108	106		39	38	
13-Jun	109	108		41	40	
14-Jun	108	108		35	34	
17-Jun					35	
18-Jun	108	109		31	28	
19-Jun	109	109		38	37	
20-Jun	109	109	109	45	46	40
21-Jun	109			32		
22-Jun	110		108	39		36
24-Jun	109			34		
25-Jun	109			30		
26-Jun	109	107		30	30	
29-Jun	110			39		
Max.	110	109	110	45	46	40
Avg.	108	108	109	35	36	38
Min	104	106	108	28	28	36

Max. Temperature (^{0}F)	110
AVG. Temperature (^{0}F)	108
Min. Temperature (^{0}F)	104
Max. Concentration (%)	46
Avg. Concentration (%)	37
Min. Concentration (%)	28

HCl Pickle Tank Conditions

Zinc 5 (23E)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
3-Jan	90	89	90	43	42	40
4-Jan	89	91	89	38	33	40
5-Jan	91	89	90	35	33	40
7-Jan	92	98	90	38	38	32
8-Jan	90	90	89	38	36	31
9-Jan	89	90	89	38	35	31
10-Jan	90	90	90	37	35	32
11-Jan	90	90	90	39	38	32
12-Jan	90	90	92	38	35	33
14-Jan	89		92	40		35
15-Jan	90	90	90	32	31	25
16-Jan	91	90	90	21	20	40
17-Jan	91	90	90	37	32	37
18-Jan	87	90	89	39	33	40
19-Jan	89	90		39	38	
20-Jan			89			33
21-Jan	90	90	90	40	36	30
22-Jan	90	90	90	34	30	27
23-Jan	89	89	90	37	35	40
24-Jan	90			40		
26-Jan	89	90		40	35	
27-Jan			87			31
28-Jan	89	90	89	37	35	40
29-Jan	89	90	90	38	32	28
30-Jan	89	90	90	26	30	40
31-Jan	90	90	88	39	35	30
Max.	92	98	92	43	42	40
Avg.	90	90	90	37	34	34
Min	87	89	87	21	20	25

Max. Temperature (^{0}F)	98
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	87
Max. Concentration (%)	43
Avg. Concentration (%)	35
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc 5 (23E)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Feb	89	90	91	37	33	30
2-Feb	90	90	92	38	33	30
4-Feb	92	90	89	39	35	30
5-Feb	90	90	89	31	34	31
6-Feb	89	89	89	39	34	30
7-Feb	92	90	89	40	35	32
8-Feb	92			34		
10-Feb			89			35
11-Feb	90	90	90	31	29	38
12-Feb	91	90	90	34	30	40
13-Feb		89	91		36	30
14-Feb	89	90	89	39	33	40
15-Feb	90	90	89	39	33	39
16-Feb	90	89		33	30	
18-Feb	88	90	92	39	34	30
19-Feb	89	90	91	36	32	40
20-Feb	89	88	89	38	32	31
21-Feb	89	89	89	41	38	32
22-Feb	92			31		
24-Feb			91			32
25-Feb	90	90	90	39	36	31
26-Feb	89	90	89	41	40	35
27-Feb	89	89	89	32	25	41
28-Feb	90	89	91	40	35	32
Max.	92	90	92	41	40	41
Avg.	90	90	90	37	33	34
Min	88	88	89	31	25	30

Max. Temperature (^{0}F)	92
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	88
Max. Concentration (%)	41
Avg. Concentration (%)	35
Min. Concentration (%)	25

HCl Pickle Tank Conditions

Zinc 5 (23E)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar	90	89	89	41	35	32
3-Mar			88			30
4-Mar	90	90	89	35	40	37
5-Mar	89	89	88	31	40	40
6-Mar	89	89	89	34	33	31
7-Mar	90	94	89	38	35	31
8-Mar	89	88	90	37	36	30
9-Mar	90			37		
10-Mar			88			30
11-Mar	89	89	91	35	30	37
12-Mar	88	90	89	33	30	39
13-Mar	89	90	89	35	33	38
14-Mar	90	90	90	34	33	30
15-Mar	91	90	90	30	28	40
16-Mar	89			35		
18-Mar	93	90	88	35	32	36
19-Mar	94	90		37	37	34
20-Mar	91	90	88	31	28	39
21-Mar	88	90	89	38	35	30
22-Mar	89	90		25	21	
24-Mar						40
25-Mar	89	89	90	41	38	33
26-Mar	90	90	90	29	24	40
27-Mar	89	90	89	43	38	34
28-Mar	90	90	90	31	28	39
Max.	94	94	91	43	40	40
Avg.	90	90	89	35	33	35
Min	88	88	88	25	21	30

Max. Temperature (^{0}F)	94
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	88
Max. Concentration (%)	43
Avg. Concentration (%)	34
Min. Concentration (%)	21

HCl Pickle Tank Conditions

Zinc 5 (23E)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	90	90	88	36	33	39
2-Apr	89	90	90	39		31
3-Apr	89	90	91	30	28	36
4-Apr	89	90	89	35	31	39
5-Apr	89			39		
7-Apr			87			36
8-Apr	85	90	89	31	30	39
9-Apr	89	90	89	37	35	30
10-Apr	91	90	90	38	36	29
11-Apr	89	89	91	40	38	39
12-Apr	90	90	89	38	36	37
13-Apr	89	89		36	33	
15-Apr	91	90	89	31	30	39
16-Apr	89	90	92	34	31	40
17-Apr	89	89	90	38	34	31
18-Apr	90	90	91	38	35	33
19-Apr	89	89	89	40	40	39
20-Apr	89		91	35		37
21-Apr	89			33		
22-Apr		89	89		30	38
23-Apr	90	86	89	38	32	40
24-Apr	89	90	90	34	32	40
25-Apr	90	90	90	36	35	30
26-Apr	91	90	89	37	37	32
27-Apr	92			36		
29-Apr	89	90	91	39	35	36
30-Apr	91	90	90	35	34	40
Max.	92	90	92	40	40	40
Avg.	89	90	90	36	34	36
Min	85	86	87	30	28	29

Max. Temperature (^{0}F)	92
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	85
Max. Concentration (%)	40
Avg. Concentration (%)	35
Min. Concentration (%)	28

HCl Pickle Tank Conditions

Zinc 5 (23E)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-May	90	90	92	35	32	40
2-May	89	90	90	37	37	30
3-May	90			29		
4-May		89	89		39	38
6-May	89	89	89	34	32	37
7-May	90	90	90	32	30	28
8-May	89	89	90	25	20	38
9-May	91	89	91	33	30	32
10-May	91	90	90	28	25	36
11-May	89	90	88	30	28	40
13-May	90	90	91	36	33	30
14-May	90	90	89	40	40	35
15-May	89	90	89	32	29	39
16-May	89	90	89	39	36	33
17-May	91	90		39	43	
20-May		92	93		40	35
21-May	89	90	88	32	28	37
22-May	90	90	89	35	32	37
23-May	90	90	90	35	31	39
24-May	91	90	91	36	29	38
25-May	90	90	89	34	30	38
28-May	90	90	90	33	30	39
29-May	89	90	90	35	30	39
30-May	89	90	90	35	31	40
31-May	90	90	90	36	34	31
Max.	91	92	93	40	43	40
Avg.	90	90	90	34	32	36
Min	89	89	88	25	20	28

Max. Temperature (^{0}F)	93
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	88
Max. Concentration (%)	43
Avg. Concentration (%)	34
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc 5 (23E)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
3-Jun	89	90	90	39	35	35
4-Jun	89	89	89	28	30	39
5-Jun	88	90	90	40	36	33
6-Jun	89	90	89	33	32	37
7-Jun	90	90	89	38	35	40
8-Jun	90			39		
10-Jun	91	91	89	37	34	30
11-Jun	89	90	90	28	28	40
12-Jun	90	90	89	34	35	36
13-Jun	90	90	90	34	34	30
14-Jun	89	90	92	35	35	35
17-Jun	94	94	89	35	34	32
18-Jun	89	90	89	29	25	39
19-Jun	89	90	90	35	31	40
20-Jun	89	90	90	39	35	30
21-Jun	91		91	29		40
22-Jun	90	91	90	35	34	31
23-Jun	90		89	40		37
24-Jun	89	90	91	34	33	30
25-Jun	89	90	89	29	27	30
26-Jun	90	90	90	25	36	34
27-Jun	89	90	90	29	24	41
28-Jun		89	89	40	35	32
29-Jun	89	90		25	26	
30-Jun			90			36
Max.	94	94	92	40	36	41
Avg.	90	90	90	34	32	35
Min	88	89	89	25	24	30

Max. Temperature (^{0}F)	94
AVG. Temperature (^{0}F)	90
Min. Temperature (^{0}F)	88
Max. Concentration (%)	41
Avg. Concentration (%)	34
Min. Concentration (%)	24

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-Jan	86	88	93	36	36	30
3-Jan	92	90		35	34	
4-Jan	93	94	95	37	36	33
5-Jan	90	95	93	27	39	33
7-Jan	94	94	93	39	35	30
8-Jan	93	92	94	38	32	37
9-Jan	93	94	94	37	36	40
10-Jan	94	94	93	40	34	40
11-Jan	92	93	93	40	36	30
12-Jan	94	93		35	33	
13-Jan			85			36
14-Jan	94	93	91	37	32	37
15-Jan	92	93	93	36	35	30
16-Jan	93	93	92	27	26	27
17-Jan	93	93	90	23	35	30
18-Jan	87	93	95	36	34	30
19-Jan	90	92		36	35	
20-Jan			87			30
21-Jan	94	93	88	37	36	40
22-Jan	88	88	86	39	33	27
23-Jan	87	87	93	34	35	40
24-Jan	94	94	94	39	35	38
25-Jan	89	92	86	38	30	40
26-Jan	92	92		35	31	
27-Jan			84			37
28-Jan	88	91	94	34	30	39
29-Jan	93	92	91	38	35	29
30-Jan	91	92	91	23	37	35
31-Jan	89	92	86	32	39	40
Max.	94	95	95	40	39	40
Avg.	91	92	91	35	34	34
Min	86	87	85	23	26	27

Max. Temperature (^{0}F)	95
AVG. Temperature (^{0}F)	92
Min. Temperature (^{0}F)	85
Max. Concentration (%)	40
Avg. Concentration (%)	34
Min. Concentration (%)	23

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Feb	93	92	92	36	32	40
2-Feb	92	92		38	35	
4-Feb	84	83	86	33	27	36
5-Feb	89	90	87	36	32	37
6-Feb	92	92	87	38	33	39
7-Feb	87	93	87	39	33	39
8-Feb	88	89	86	36	29	36
9-Feb	94	96		34	30	
10-Feb			89			38
11-Feb	90	92	88	39	35	30
12-Feb	93	93	88	35	33	40
13-Feb	87	89	92	36	35	32
14-Feb	92	92	86	40	35	37
15-Feb	87	88		37	32	
18-Feb	84	88	90	42	40	40
19-Feb	93	93	86	36	29	35
20-Feb	84	83	84	33	25	40
21-Feb	92	93	90	42	38	35
22-Feb	87	91	86	30	38	38
23-Feb	84			33		
24-Feb			86			39
25-Feb	84	84	80	35	29	35
26-Feb	92	85	81	33	28	35
27-Feb	90	85		33	30	
28-Feb	92	94		38	36	
Max.	94	96	92	42	40	40
Avg.	89	90	87	36	32	37
Min	84	83	80	30	25	30

Max. Temperature (^{0}F)	96
AVG. Temperature (^{0}F)	89
Min. Temperature (^{0}F)	80
Max. Concentration (%)	42
Avg. Concentration (%)	35
Min. Concentration (%)	25

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar	92	94	83	31	24	35
2-Mar	89			33		
4-Mar	83	84	83	28	38	40
5-Mar	84	83	89	33	30	35
6-Mar	92	93		38	38	
7-Mar		94	87		36	36
8-Mar	93	93	92	35	33	39
10-Mar			89			40
11-Mar	93	94	89	36	33	39
12-Mar	91	92	89	42	34	39
13-Mar	86	83		38	32	
14-Mar	76	83		39	39	
15-Mar	92	93	87	35	33	36
16-Mar	93	89		37	33	
18-Mar	85	83	79	30	25	40
19-Mar	85	84		37	32	
20-Mar	94	83	89	40	38	33
21-Mar	85	90	93	26	24	40
22-Mar	86	86	86	35	35	35
23-Mar	88			28		
25-Mar	90	86	93	32	28	38
26-Mar	85	85	93	36	30	38
27-Mar	92			38		
28-Mar	92	98	96	38	34	41
Max.	94	98	96	42	39	41
Avg.	88	89	89	35	32	38
Min	76	83	79	26	24	33

Max. Temperature (^{0}F)	98
AVG. Temperature (^{0}F)	89
Min. Temperature (^{0}F)	76
Max. Concentration (%)	42
Avg. Concentration (%)	35
Min. Concentration (%)	24

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	87	88	90	42	40	36
2-Apr	84	84	89	30	40	40
3-Apr	91	89	89	42	36	31
4-Apr	91	89		39	36	
5-Apr	94	89	89	33	30	40
6-Apr	90	89	91	40	35	31
8-Apr	91	88	92	29	20	39
9-Apr	88	88	85	35	32	38
10-Apr	89	88	90	33	30	36
11-Apr	89	89		32	33	
12-Apr		100	93		33	41
13-Apr	93	93	94	40	39	36
14-Apr	93	93	91	39	37	33
15-Apr	89		94	40		41
16-Apr	94	93		38	34	
17-Apr	89	89	93	31	25	40
18-Apr	93	90	90	34	30	35
19-Apr	91	90	90	31	28	33
20-Apr	89	92	94	28	40	40
22-Apr	93	93	93	36	33	39
23-Apr	90	93	93	34	30	40
24-Apr	90	89	89	37	38	30
25-Apr	89	93	94	40	40	37
26-Apr	89	90	90	31	30	37
27-Apr	87	89	88	33	31	40
29-Apr	92	93	92	38	36	36
30-Apr	103	94	95	37	33	38
Max.	103	100	95	42	40	41
Avg.	91	91	91	35	33	37
Min	84	84	85	28	20	30

Max. Temperature (^{0}F)	103
AVG. Temperature (^{0}F)	91
Min. Temperature (^{0}F)	84
Max. Concentration (%)	42
Avg. Concentration (%)	35
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-May	95	93	95	40	39	38
2-May	92	93		40	35	
3-May	92	93		33	30	
4-May	93	94	88	22	18	41
6-May	92	93	94	33	30	28
7-May	90	92		42	40	
8-May	93	93		34	30	
9-May	94	93		23	20	
10-May	94	95	96	40	37	31
11-May	95	94	94	40		41
13-May	91	91	94	36	32	38
14-May	92	91	94	35	30	38
15-May	93	93	93	32	30	40
16-May	93	93	93	38	37	30
17-May	93	93	93	38	39	34
18-May	95	93		39	39	
20-May	94	94	94	39	35	38
21-May	98	94	95	38	33	38
22-May	94	94	93	36	30	34
23-May	94	93	94	35	30	37
24-May	95	94	93	33	31	28
29-May	85	93	97	29	25	41
30-May	76	94	97	38	35	31
31-May	92	93	94	23	20	41
Max.	98	95	97	42	40	41
Avg.	92	93	94	35	32	36
Min	76	91	88	22	18	28

Max. Temperature (^{0}F)	98
AVG. Temperature (^{0}F)	93
Min. Temperature (^{0}F)	76
Max. Concentration (%)	42
Avg. Concentration (%)	34
Min. Concentration (%)	18

HCl Pickle Tank Conditions

Zinc Nickel 1 LV (23A1)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Jun	74			35		
3-Jun	75			39		
4-Jun	94	93	94	41	38	33
5-Jun	94	93	96	28	25	21
6-Jun	96	95	94	40	40	38
7-Jun	92	93	93	30	28	32
8-Jun	94	94		25	40	
10-Jun	96		95	40		40
11-Jun	99	98	94	38	35	37
12-Jun	98	98	95	36	32	36
13-Jun	94	93	94	31	28	36
14-Jun	92	93	95	31	28	40
15-Jun	94	94		34	39	
16-Jun			93			40
17-Jun	92	93	99	30	28	40
18-Jun	94	93	94	33	32	39
19-Jun	95	94	95	35	35	31
20-Jun	95	96	100	25	20	35
21-Jun	97		100	33		39
22-Jun	101	100	100	35	33	37
23-Jun	103		100	36		40
24-Jun	101	101	89	38	34	31
25-Jun	98	94	106	27	25	40
26-Jun	102	98	90	39	35	32
27-Jun	101	101	101	27	24	36
28-Jun	96	98	98	32	33	30
29-Jun	101	98	105	28	25	40
30-Jun			96			35
Max.	103	101	106	41	40	40
Avg.	95	96	97	33	31	36
Min	74	93	89	25	20	21

Max. Temperature (^{0}F)	106
AVG. Temperature (^{0}F)	96
Min. Temperature (^{0}F)	74
Max. Concentration (%)	41
Avg. Concentration (%)	33
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

January 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
2-Jan	99	99	97	39	39	34
3-Jan	98	97	98	30	39	36
4-Jan	98	98	100	33	39	36
5-Jan	100	99	100	32	37	36
7-Jan	99	98	101	35	32	30
8-Jan	98	98	96	25	30	40
9-Jan	100	96	101	39	33	31
10-Jan	99	96	101	38	34	31
11-Jan	99	102	101	39	36	35
12-Jan	99	99		29	38	
13-Jan			99			40
14-Jan	90	92	95	39	35	33
15-Jan	90	90	96	28	26	25
16-Jan	98	95	98	40	33	31
17-Jan	98	98	101	24	32	40
18-Jan	99	98	101	40	34	33
19-Jan	101	102		37	35	
20-Jan			93			36
21-Jan	98	97	99	30	28	40
22-Jan	99	98	95	37	35	33
23-Jan	98	98	94	27	33	32
24-Jan	99	98	100	28	20	35
25-Jan			92			33
28-Jan	95	94	98	27	25	33
29-Jan	99	100	100	38	34	32
30-Jan	101	100	101	26	37	39
31-Jan	98	98	97	34	31	40
Max.	101	102	101	40	39	40
Avg.	98	98	98	33	33	35
Min	90	90	92	24	20	25

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	90
Max. Concentration (%)	40
Avg. Concentration (%)	34
Min. Concentration (%)	20

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

February 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Feb	98	100	100	36	36	33
2-Feb	100	100	101	39	36	31
4-Feb	88	92	97	38	35	36
5-Feb	99	94	97	31	30	40
6-Feb	98	98	98	38	35	32
7-Feb	89	100	101	40	35	32
8-Feb	99	98	99	38	35	32
9-Feb		100			37	
10-Feb			100			40
11-Feb	95	93	98	45	40	36
12-Feb	98	94	96	33	39	40
13-Feb	100	98	99	31	27	31
14-Feb	100	98	99	38	35	32
15-Feb	101	91	101	26	22	38
16-Feb	101	98	102	29	40	40
18-Feb	98	96	96	38	34	40
19-Feb	95	93	93	37	35	30
20-Feb	101	98	100	40	38	34
21-Feb	100	98	99	28	25	40
22-Feb	98	96	98	30	30	40
23-Feb	99			39		
24-Feb			86			38
25-Feb	98	98	99	30	28	40
26-Feb	88	86	97	34	32	39
27-Feb	98	98	97	36	31	32
28-Feb	98	98	97	38	35	32
Max.	101	100	102	45	40	40
Avg.	97	96	98	35	33	36
Min	88	86	86	26	22	30

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	97
Min. Temperature (^{0}F)	86
Max. Concentration (%)	45
Avg. Concentration (%)	35
Min. Concentration (%)	22

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

March 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Mar	98	98		41	38	
3-Mar			100			33
4-Mar	90	98	99	30	25	40
5-Mar	98	98	98	38	32	30
6-Mar	98	91	101	39	36	33
7-Mar	97	96	98	36	35	32
8-Mar	102	91	98	35	38	31
9-Mar	101			40		
11-Mar	101	98	99	40	38	34
12-Mar	101	98	101	29	41	44
13-Mar	98	98	98	37	35	31
14-Mar	98	98	100	38	36	32
15-Mar	98	98	98	29	34	39
16-Mar	98	98		34	32	
18-Mar	100	98	89	34	31	26
19-Mar	98	100	98	39	34	32
20-Mar	97	96	95	39	38	34
21-Mar	98	99	96	28	24	40
22-Mar	100	95	96	40	35	33
23-Mar	98			39		
24-Mar			90			33
25-Mar	97	96	95	39	39	32
26-Mar	98	98	100	30	38	40
27-Mar	101	98	99	35	33	31
28-Mar	98	98	96	36	34	31
Max.	102	100	101	41	41	44
Avg.	98	97	97	36	35	34
Min	90	91	89	28	24	26

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	98
Min. Temperature (^{0}F)	89
Max. Concentration (%)	44
Avg. Concentration (%)	35
Min. Concentration (%)	24

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

April 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Apr	100	99	100	30	35	40
2-Apr	100	101	100	38	35	32
3-Apr	97	98	101	31	38	38
4-Apr	98	98	97	29	32	40
5-Apr	101	100	95	43	38	33
6-Apr	98	98	99	29	24	37
7-Apr			99			33
8-Apr	95	90	100	28	25	38
9-Apr	101	100	101	41	42	38
10-Apr	100	100	100	32	30	40
11-Apr	99	99	100	38	34	31
12-Apr	99	100	100	26	36	33
13-Apr	101	100	101	29	38	40
14-Apr	100	100	100	31	38	33
15-Apr	100	99	101	40	38	35
16-Apr	101	100	101	29	25	40
17-Apr	101	101	101	40	35	31
18-Apr	101	101	101	28	36	33
19-Apr	100	100	100	40	38	32
20-Apr	98	99		38	35	
21-Apr			100			33
22-Apr	101	101	100	39	34	33
23-Apr	101	98	101	37	36	36
24-Apr	101	101	101	30	37	40
25-Apr	100	101	101	35	32	40
26-Apr	101	101		39	37	
28-Apr			95			34
29-Apr	98	90	100	38	38	34
30-Apr	99	101	100	28	38	38
Max.	101	101	101	43	42	40
Avg.	100	99	100	34	35	36
Min	95	90	95	26	24	31

Max. Temperature (^{0}F)	101
AVG. Temperature (^{0}F)	100
Min. Temperature (^{0}F)	90
Max. Concentration (%)	43
Avg. Concentration (%)	35
Min. Concentration (%)	24

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

May 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-May	101	101	100	37	28	34
1-May	98	98	101	31	38	40
3-May	99	100	101	33	32	30
4-May	101	99		39	37	
5-May			101			34
6-May	98	101	101	40	40	40
7-May	100	93	101	33	29	26
8-May	101	98	101	37	33	30
9-May	101	98	101	29	29	40
10-May	100	100	101	33	31	30
11-May	101	99	94	35	34	
12-May			94			31
13-May	99	100	101	34	34	31
14-May	99	99	101	27	22	39
15-May	99	99	101	31	28	28
16-May	101	100		39	35	
20-May	98	96	101	38	33	31
21-May	101	101	101	37	35	40
22-May	101	101	101	40	38	33
23-May	100	98	101	35	35	33
24-May	101	99	101	28	25	37
25-May	99	99	101	29	31	27
28-May	98	97	101	39	39	34
29-May	99	98	101	29	24	40
30-May	102	100	101	35	30	37
31-May	99	98	101	39	35	33
Max.	102	101	101	40	40	40
Avg.	100	99	100	34	32	34
Min	98	93	94	27	22	26

Max. Temperature (^{0}F)	102
AVG. Temperature (^{0}F)	100
Min. Temperature (^{0}F)	93
Max. Concentration (%)	40
Avg. Concentration (%)	34
Min. Concentration (%)	22

HCl Pickle Tank Conditions

Zinc Nickel 2 HV (23A)

June 2013

Date	Temperature (^{0}F)			Concentration (%)		
	1st Shift	2nd Shift	3rd Shift	1st Shift	2nd Shift	3rd Shift
1-Jun	101	101		28	23	
3-Jun	98	98	102	45	40	38
4-Jun	98	98	102	30	27	40
5-Jun	101	101	102	35	33	30
6-Jun	102	101	101	37	35	31
7-Jun	101		101	30		30
8-Jun	99	100		37	34	
10-Jun	102	100	101	31	30	40
11-Jun	99	93	101	40	36	33
12-Jun	101	101	101	27	36	33
13-Jun	99	101	101	38	37	35
14-Jun	98	101		29	26	
16-Jun			100			35
17-Jun	98	106	100	30	30	38
18-Jun	99	99	100	35	33	31
19-Jun	99	99	101	26	33	30
20-Jun	99	99	101	35	36	33
21-Jun	101		102	38		34
22-Jun	101	101	100	27	35	34
23-Jun	101		102	40		38
24-Jun	99	101	101	31	26	40
25-Jun	101	102	101	34	34	40
26-Jun	100	101	101	40	38	37
27-Jun	101	101	101	29	30	37
28-Jun	100	99	102	38	35	31
29-Jun	101	101	101	28	23	35
30-Jun			89			32
Max.	102	106	102	45	40	40
Avg.	100	100	101	34	32	35
Min	98	93	89	26	23	30

Max. Temperature (^{0}F)	106
AVG. Temperature (^{0}F)	100
Min. Temperature (^{0}F)	89
Max. Concentration (%)	45
Avg. Concentration (%)	34
Min. Concentration (%)	23

Plating Line 2013 hours of Operation									
Time Period	EUPLATING LINE 3 23B	EUPLATING LINE 6 23D - Post conversion	EUPLATING LINE 12 23E	EUPLATING LINE 1 (Zinc Nickel) HV 23A Post conversion	EUPLATING LINE 11 LV 23A1	EUPLATING LINE 4 23I	EUPLATING LINE 7 43A	EUPLATING LINE 8 23F	Wax 33E
January	245	389	533	584	612	275	390	310	678
February	309	271	429	562	511	243	330	251	597
March	255	204	464	506	484	209	384	267	562
April	325	224	565	632	565	252	443	291	720
May	336	214	527	568	480	222	424	286	606
June	276	230	483	584	515	233	402	305	447
July									
August									
September									
October									
November									
December									
Yearly Totals	*1,746*	*1,532*	*3,001*	*3,436*	*3,147*	*1,434*	*2,373*	*1,710*	*3,610*
Winter % (Jan, Feb, Dec)	32%	43%	32%	33%	36%	36%	30%	33%	35%
Spring % (Mar - May)	52%	42%	52%	50%	48%	48%	53%	49%	52%
Summer % (Jun - Aug)	16%	15%	16%	17%	16%	16%	17%	18%	12%
Fall % (Sep - Nov)	0%	0%	0%	0%	0%	0%	0%	0%	0%

Toxic Air Contaminant Emission Summary
Ajax Metal Processing
Detroit, Michigan
Rule 290 Calculations
Year 2013

HCl Emissions

		A		M	P	K	R	T1	W	Se	E_{hr}	H	E_{ma}
Tank ID	Bath	Surface Area (ft^2)	Toxic Air Contaminant	Molecular Weight (lb/lb-mole)	Partial Pressure (psia)	Gas-Mass Transfer Coefficient	Gas Constant (psia ft^3/°R lb-mole)	Temperature (°R)	Uncontrolled Emissions (lb/hr)	Scrubber Efficiency (%)	Emission Rate (lb/hr)	Hours/yr	Emission Rate (lb/yr)
EUPhos1	HCl	39.1	HCl	36.461	1.19	0.003465	10.73	560	3.52	99%	0.0352	2,373	83.52
EUPhos2	HCl	36.3	HCl	36.461	1.19	0.003465	10.73	560	3.27	99%	0.0327	1,710	55.86

Monthly Emission Rates (As required by R336.1290(c))

	Hours of Operation		HCl Emissions (lb/mo)		In Compliance
	Phosphate 1	Phosphate 2	Phosphate 1	Phosphate 2	<500 lb/mo)
January	390	310	13.73	10.13	YES
February	330	251	11.61	8.20	YES
March	384	267	13.52	8.72	YES
April	443	291	15.59	9.51	YES
May	424	286	14.92	9.34	YES
June	402	305	14.15	9.96	YES
July	0	0	-	-	YES
August	0	0	-	-	YES
September	0	0	-	-	YES
October	0	0	-	-	YES
November	0	0	-	-	YES
December	0	0	-	-	YES
			83.52	55.86	

ITSL/IRSL from DEQ Air Toxics Website (3/9/10)

CAS Number	Chemical Name	Notes	Status	ITSL (ug/m3)	Averaging Time	Second ITSL (ug/m3)	Second ITSL Avg Time	IRSL (ug/m3)	SRSL (ug/m3)	Carc Avg Time
7647010	hydrogen chloride		FINAL	20	annual	2100	1 hr			

HCl Emission Calculation
Where:

W = uncontrolled emission rate (lb/hour)
M = molecular weight of compound (lb/lb mole)
A = area of tank (FT2)
P = vapor pressure of compound in solution (psia @ T1)
K = gas-mass transfer coefficient (ft/second = 0.011479 x U^0.78/M(1/3)
U = wind speed in miles per hour (assume 1 mile/hour)
R = gas constant = 10.73
T1 = absolute temperature of solution (°R = °F + 460)

Where:

E_{hr} = controlled emission rate (lb/hour)
W = uncontrolled emission rate (lb/hour)
Se = Scrubber control efficiency (%)

Where:

E_{yr} = controlled emission rate (lb/yr)
E_{hr} = controlled emission rate (lb/hour)
H = hours per year

P_{HCl} = Partial pressure, which was interpolated from Perry's Chemical Engineers' Handbook 6th edition Table 3-11 (see below)
The equation is taken from MDEQ Emission Calculation Fact Sheet for Electroplating Operations (Fact Sheet #9840) (This is also known as Clements Vaporization model)

HCL Vapor Pressure
From Perry's 6th addition Table 3-11

(mm Hg)	Wt% HCl			
oC	0.3	0.3145	0.32	
35	28.60		60.00	known
37.8	34.65	61.55	71.76	interpolated
40	39.40		81.00	known
Convert from mm Hg to psia				
37.8	0.67	1.19	1.39	psia