



City of Caldwell
Waste Water Treatment Plant

Annual Pretreatment Report

The Annual Pretreatment Report is intended to fulfill the annual report requirements of 40 CFR 403.12(i), and the Pretreatment Report Requirements listed in NPDES permit ID0021504 Section II.A.(9).

**Reporting
Year 2017**

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I. ACTIVITIES FOR THE REPORTING YEAR

1. Minor development activities intended to eventually modify the Pretreatment Program have been conducted over the reporting year:
 - i. A survey of
2. There have been program modifications to two of the City's categorical industrial user's permits.
 - i. During our 2016 inspection, we found that Inspire Technology's process had changed to cleaning parts that hold wafers and cleaning parts that assist in processing silicon and ceramic parts. Due to the change in their process, the City is reclassifying Inspire Technologies to the 40 CFR 469.18 category. A draft of a new permit is under review and will be finalized shortly.
3. Darigold, the City's only significant industrial user, had 4 permit violations, which are summarized in section 3.4.
4. Fiberguide Industries, a categorical user, was found to be in violation of their permit. Their annual report is missing a few required parameters and certification statements. They have been notified by mail. Per 40 CFR 403.8(f)(2)(viii), if Fiberguide Industries does not come into compliance by December 4, 2016 then their status will be escalated to significant non-compliance and further enforcement action will be taken. Further details can be viewed in Fiberguide Industries' Inspection Report which is included in Appendix B.

II. FUTURE ACTIVITIES

B. Future Activities

1. Program Modifications
 - i. The City has received its new NPDES permit, effective November 1, 2016. The City has updated and modified the Pretreatment Program in April 2017 as required. The City is considering amending the Sewer Use Ordinance to include the legal authority to classify industrial users in the Non-significant CIU and Middle Tier CIU categories.
 - ii. The Local Limits Evaluation for Copper was completed by October 31, 2017. The other parameters listed in the NPDES permit are scheduled to be evaluated for local limits by October 31, 2018.
 - iii. The City is investigating ways to electronically survey industrial users in order to collect and store user information more efficiently. The first step is to update the City website which was accomplished October 17, 2016. Pretreatment personnel will then discuss with IT personnel the feasibility of collecting information from non-domestic users through the City website.
 - iv. The City has purchased Hach WIMS (Water Information Management Solution) to keep track of and compile data including test results and

Industrial User information. It is in the process of being set up and implemented.

- v. Inspire Technologies will be issued a new Categorical Industrial User permit within this next reporting year.
2. The frequency of pollutants to be monitored by the City depends on the user’s self-monitoring requirements detailed in their permit. At minimum, all pollutants with categorical and local limit pretreatment standards will be monitored by the City at least once during the monitoring year. The City may monitor more frequently if deemed necessary.

SIU	Planned Monitoring Events
Darigold	March 2018, June 2018, September 2018
Fiberguide Industries	March 2018, June 2018, September 2018
Inspire Technologies	March 2018, June 2018, September 2018

SIU	Planned Inspection Events
Darigold	August 2018
Fiberguide Industries	August 2018
Inspire Technologies	August 2018

3. No non-significant industrial users that are planned for inspection at this time.

III. INDUSTRIAL USERS

3.1 Non-Domestic Users

No additions or deletions have been made to the City of Caldwell Significant Industrial User (SIU) or Categorical Industrial User (CIU) list. The list of non-domestic users has been updated and is included in Appendix A.

3.2 Significant Industrial Users

Of the significant and categorical users below, no IU permit or local limit is less stringent than the applicable federal minimum requirements. On agreement with the City, Darigold’s permit includes mass limits for BOD and TSS that supersede local conventional pollutant limits. Darigold must monitor these and other parameters daily to ensure slug loading does not occur.

Please note that some of the inspections and analysis were performed late, in October of 2017, due to scheduling issues.

Non-Domestic User	Class	Category	Permit No.	Expiration Date	Process
Darigold 520 Albany Street Caldwell, ID 83605	SIU	40 CFR 405.44 and 405.104	DAR-0003	04/01/2020	Dairy: Butter, Dry Milk
Fiberguide Technologies 3409 E. Linden Street Caldwell, ID 83605	CIU	40 CFR 433.17	FIB-0001	01/11/2020	Fiber Optic Cable Manufacturing
Inspire Technologies 3709 East Cleveland Blvd. Caldwell, ID 83605	CIU	40 CFR 496.18	2006.01	08/01/2016	Silicon and ceramic part cleaning

3.3 Indication of IU Permits Issued, Modified, or Reissued

Inspire Technologies was granted an administrative extension for their permit #2006.01 until a new permit is issued. A draft of their forthcoming permit is currently being reviewed and is expected to be issued within the next thirty days.

3.4 Darigold Compliance Status

Darigold had four permit violations during the last reporting year. A summary of the violations are summarized in the table below:

Date	Violation	Reason
1/20/2017	Flow = 0.58 MGD	Additional Discharge, corrected
1/21/2017	Flow = 0.63 MGD	Additional Discharge, corrected
7/09/2017	BOD = 6277 lbs/day	Operational Issue, corrected
7/13/2017	BOD = 6844 lbs/day	Operational Issue, corrected

A copy of the communications with Darigold is included in Appendix B.

After Darigold's yearly inspection by the City of Caldwell, they were found to be non-compliant due to missing paperwork. A copy of their inspection follow-up letter is available in Appendix B.

Date	Violation Summary	Corrective Action	Enforcement
11/14/2017	Failure to submit all required items for the <i>Annual Spill and Non-Compliance Prevention Report</i> and <i>Annual Discharge Report</i> .	11/10/2017: Contacted via letter of compliance status, requested missing documentation	Will be escalated to Significant Non-compliance Dec., 4, 2017 if not received.

3.5 Fiberguide Compliance Status

Fiberguide Industries did not submit all test results, certification statements, and other required report items by their annual deadline. Per 40 CFR Section 403.8(f)(2)(viii), if Fiberguide Industries does not submit the required documents by December 4, 2017, their status will be escalated to Significant Non-compliance and further enforcement action will be taken. A copy of communications with Fiberguide Industries is included in Appendix B and further details are listed in their Inspection Report, Appendix B.

Date	Violation Summary	Corrective Action	Enforcement
11/14/2017	Failure to submit all required items for the <i>Annual Spill and Non-Compliance Prevention Report and Annual Discharge Report</i> .	11/10/2017: Contacted via letter of compliance status, requested missing documentation	Will be escalated to Significant Non-compliance Dec., 4, 2017 if not received.

3.6 Inspire Technologies Compliance Status

Inspire Technologies was found to be in compliance for the 2016-2017 reporting year, as reflected in their inspection follow-up letter, available in Appendix B.

3.7 City Conducted Industrial User Sampling

The following table describes the significant and categorical industrial users inspected and sampled over the reporting year. The results listed below can be found in Appendix C.

Non-Domestic User	Inspected	1st Sampling	2nd Sampling	Results
Darigold	10/10/2017	4/25/2017, 4/26/2017	10/4/2017, 10/5/2017	Non-compliance (paperwork)
Fiberguide Industries	10/12/2017	4/25/2017, 4/26/2017	10/4/2017, 10/5/2017, 10/18/2017	Non-compliance (paperwork)
Inspire Technologies	10/25/2017	4/27/2017	10/3/2017	In Compliance

Inspection reports and analysis results for Darigold, Fiberguide Industries, and Inspire Technologies are included in Appendix B.

Darigold and Fiberguide Technologies were found to be in non-compliance with their Categorical Industrial User permit. Certification statements and other logs also need to be completed and submitted by December 4, 2017 in order to prevent escalation to significant non-compliance and further enforcement action as required by 40 CFR 403.8(f)(2)(viii).

3.8 IU's Notified of Applicable Pretreatment Standards

All of the Industrial Users that have been monitored during this period have been informed of local and federal pretreatment standards in accordance with 40 CFR 403.f.2.iii, by their City Issued Discharge Permit. No new industrial users have been identified.

No industrial users are currently under compliance schedules.

IV. METALS, CYANIDE AND VOLATILE ORGANIC COMPOUNDS

4.1 POTW Metals, Cyanide and Volatile Organic Compounds

The City of Caldwell is required by NPDES Permit ID0021504, Part II.A.8, to monitor metals in sludge samples including arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver and zinc as well as cyanide. Effluent and influent results were compiled for these analyses as well, so removal rates could be calculated. Effluent copper is monitored monthly, while influent copper is monitored twice per year. Effluent mercury is monitored quarterly, so long as the analysis results do not exceed 0.012 µg/L, in which case monitoring must be monthly for twelve months after such a result. Influent mercury and the remaining metals are monitored twice per year, for both influent and effluent samples. Volatile organics sampling must be conducted twice per year. Sludge is monitored for Cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc twice per year as well. Sludge results can be seen in Appendix D.

Results from the above analyses are compiled in Appendix D, while corresponding relevant removal rates can be found in Appendix E, and were calculated as follows:

$$R_{potw} = \frac{\bar{I} - \bar{E}_{potw}}{\bar{I}}$$

Equation 4.1 (Above): Mean removal efficiency from headworks to plant effluent. See Appendix D for results.

R_{potw} = Plant removal efficiency from headworks to plant effluent, as decimal

I = POTW influent pollutant concentration at headworks, mg/L

E_{potw} = POTW effluent pollutant concentration, mg/L

The removal rate was calculated for each pollutant for each day of sampling. No significant changes have occurred in the POTW's industrial base and compared to historic values available. Only three removal resulted in a negative percent removal, all for Bis(2-ethylhexyl)phthalate, and only for two of three days of one of two sampling events. The other events showed a positive removal rate for this compound. The negative removal rate was likely due to contamination during sampling procedures.

4.2 Allowable Headworks Loadings

The average headworks loadings are listed in Appendix E, and were calculated with the following equation:

$$AHL = \frac{(8.34)(C)(Q_{potw})}{(1 - R_{potw})}$$

Equation 4.2 (Above): Most stringent AHL. See Appendix E.

AHL = AHL, lb/day

C = Most stringent criteria, mg/L

Q_{potw} = POTW average flow rate, MGD

R_{potw} = Plant removal efficiency from headworks to plant effluent, as decimal

8.34 = Conversion factor

Three pollutant concentrations were higher than the Maximum Allowable Headworks Loadings listed in the *2000 Technically Based Local Limits* calculated by Veolia Water for the City of Caldwell. The pollutants that exceed these limits are Arsenic, Copper and Mercury. The City feels that the *2000 TBLL MAHL* limits are outdated given the increase in influent flow and thus provided other conservative AHL calculations that demonstrate headworks loading compliance. All the pollutants except for copper (CMC) and cyanide (CCC) are within the limits calculated. In the case if cyanide, this is likely to be due to a MDL that is too high during analysis. It should be noted that all cyanide samples, both influent and effluent measured below the MDL.

Note that the Year's Highest Monthly Average Flow was used to produce a higher, and thus more conservative, headworks loading in pounds for each pollutant. To keep the calculations consistent, the Year's Highest Monthly Average Flow was also used in the unadjusted AHL calculation.

The unadjusted AHL calculation is highly conservative and does not consider the flow of the Boise River and background concentration of pollutants in the river. EPA equation "5.6: Allowable Headworks Loading" based on Water Quality Criteria from the *Local Limits Development Guidance, July 2004*, was used to calculate an adjusted AHL. Given that the USGS has not yet reviewed their provisional river data and the Idaho Department of Environmental Quality has not responded to the City's request with any river quality data, provisional flow data and the current Idaho Chronic Criteria Limit for Cadmium were used in the calculation.

Based on the fact that the City's effluent complies with Idaho state and Federal regulations and that the headworks loadings are within reasonably conservative AHL calculations, the City believes that pollutant pass-through is not an issue. However, the City feels that the *2000 TBLL MAHL* calculations are outdated and will be updating the MAHLs with the required Local Limits Evaluation required by the City's new NPDES permit.

4.3 Biosolids

Currently, the City disposes of all biosolids via landfill. If the City decides to switch to surface disposal or land application of biosolids, the City will ensure pollutants are within Federal limits. Finally, while the current local limits and headworks loadings are not precluding the beneficial use of biosolids, the City feels that the 2000 TBL MAHL calculations are outdated and will be updating the MAHLs with the required Local Limits Evaluation required by the City's new NPDES permit.

The City's NPDES permit requires GC/MS analysis of each effluent extract taken for Volatile Organic analysis. These studies were completed by Anatek Labs in Moscow, Idaho, and are available in Appendix F.

4.4 Local Limits

There have been no problems encountered in the application of the local limits. No additional pollutants of concern have been identified.

Few local limits supersede the National Categorical Pretreatment Standards. The following local limits are more stringent than the National Categorical Pretreatment Standard:

Pollutant	Local Limit (mg/L)	Supersedes (mg/L)
Copper	1.8	40 CFR 433.17
Lead	0.6	40 CFR 433.17
Nickel	1.0	40 CFR 433.17
Cyanide	0.3	40 CFR 433.17

4.5 Certification

The City certifies that this data is in compliance with requirements under 40 CFR 136 and other analytical requirements specified in NPDES permit No. ID0021504.

V. INTERFERENCES, UPSETS AND VIOLATIONS

3 POTW Interferences, Upsets, and Violations

3.6 During the report period from October 2016 to September 2017 the City of Caldwell experienced noncompliance occurring on the following dates:

Date	Summary
12/02/2016	The City of Caldwell sent notice to the EPA of a brief UV disinfection failure.
12/07/2016	The City of Caldwell notified the EPA that Ceriodaphnia dubia was above the maximum daily interim limit for WET testing. This was possibly due to a biological anomaly, as expressed by the laboratory conducting the analysis.
07/20/2017	The City of Caldwell notified the EPA of a power failure due to construction that caused Effluent E. coli analysis to exceed permit limitations. The issue was immediately resolved.
08/17/2017	The City of Caldwell notified the EPA of four missing samples due to human error.

Follow up letters to the EPA that explain any noncompliance can be found under Appendix G. No violation was directly attributed to a non-domestic user.

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APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G
