

From: [Kathleen Truesdell](#)
To: ["Jim McLucas";](#)
CC:
Subject: RE: OGS Responses
Date: Thursday, August 05, 2010 1:23:20 PM
Attachments:

Thanks

-----Original Message-----

From: Jim McLucas [mailto:jim.mclucas@radback.com]
Sent: Thursday, August 05, 2010 1:17 PM
To: Kathleen Truesdell
Cc: 'Bryan Bertacchi'; 'Greg Lamberg'; 'Gregory Darwin'
Subject: RE: OGS Responses

Nope. The water that is circulating through the evaporative fluid cooler is chemically treated much like swimming pool water. The chemicals are typically added in very low concentrations with occasional shock treatment to curb biological growth on the fill. The acids and caustic end up neutralizing with one another.

Thanks!

- Jim

From: Kathleen Truesdell [mailto:ktruesdell@baaqmd.gov]
Sent: Thursday, August 05, 2010 1:05 PM
To: Jim McLucas
Cc: Bryan Bertacchi; Greg Lamberg; Gregory Darwin
Subject: RE: OGS Responses

Jim,

The only materials listed in the MSDS that are also TACs are acids and bases (sodium hydroxide, sulfuric acid, and phosphoric acid). Is there quantifiable residual of any of these?

Thanks,
Kathleen

-----Original Message-----

From: Jim McLucas [mailto:jim.mclucas@radback.com]

Sent: Thursday, August 05, 2010 12:08 PM

To: Kathleen Truesdell

Cc: Bryan Bertacchi; Greg Lamberg; 'Gregory Darwin'

Subject: RE: OGS Responses

Kathleen –

Here's the list of chemicals that we previously provided:

- Bromine-containing solution (e.g., NALCO STABREX® ST20)
- Sodium dichloroisocyanurate/ Sodium bromide (e.g., NALCO TOWERBROM® 960)
- Sulfuric acid (93%)
- Proprietary non-oxidizing biocide (e.g., NALCO 7330)
- Proprietary corrosion/scale inhibitor (e.g., NALCO 3D TRASAR® 247/294)
- Proprietary corrosion inhibitor (e.g., NALCO 73801WR)
- Diagnostic tracer chemical (e.g., NALCO 3D TRASAR 3DTBR06)

The CAS numbers are indicated in Table 5.5- of the AFC (I've attached the table for your convenience). The MSDS sheets are also attached.

Sulfuric acid is only used for pH control (thus very, very little, if any, residual sulfuric acid will exist in the circulating water).

Thanks!

- Jim

From: Gregory Darwin [mailto:darwin@atmosphericdynamics.com]
Sent: Thursday, August 05, 2010 10:29 AM
To: Jim McLucas
Subject: FW: OGS Responses

Gregory Darwin
Atmospheric Dynamics, Inc.
Torres Street 3 SW of Mountain View
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831.620.0481 (p)
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From: Kathleen Truesdell [mailto:ktruesdell@baaqmd.gov]
Sent: Thursday, August 05, 2010 8:26 AM
To: Gregory Darwin
Subject: FW: OGS Responses

Greg,

Please confirm there are no TAC emissions from the chemicals added to the evaporative fluid cooler. Please provide MSDS with CAS Numbers.

What is the max concentration of sulfuric acid in the water at the evaporative fluid cooler? or is it neutralized?

Thanks,
Kathleen

-----Original Message-----

From: Gregory Darwin [mailto:darwin@atmosphericdynamics.com]
Sent: Wednesday, June 23, 2010 11:10 AM
To: Kathleen Truesdell

Subject: OGS Responses

Hi Kathleen. Attached are the responses but we have added to the commissioning section. Please review and let me know if you have any questions.

Regards.

Gregory Darwin

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