

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**SURFACE MINING DOCKET NO. C16-0022-SC-01-F
APPLICATION BY ALCOA USA CORP.
FOR RELEASE OF PHASE III RECLAMATION OBLIGATIONS ON 261.3 ACRES,
PERMIT NO. 1G, SANDOW MINE, MILAM AND LEE COUNTIES, TEXAS**

**ORDER APPROVING RELEASE OF PHASE III RECLAMATION OBLIGATIONS
FOR 261.3 ACRES**

Statement of the Case

Alcoa USA Corp. (Alcoa), P.O. Box 1491, Rockdale, Texas 76567 applied to the Railroad Commission of Texas (Commission), Surface Mining and Reclamation Division, for Phase III release of reclamation obligations for 261.3 acres within the Sandow Mine located in Milam and Lee Counties, Texas. The application is made pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2017), and the "Coal Mining Regulations," Tex. Railroad Comm'n, 16 TEX. ADMIN. CODE CH. 12 (Thomson West 2017).

Permit No. 1G currently authorizes surface coal mining operations at Alcoa's Sandow Mine within its 8,079.7-acre permit area. Copies of the application were filed in required County and Commission offices and distributed to applicable agencies for review and comment. No requests for hearing were filed following public notice. The only parties to the proceeding are Alcoa and the Commission's Surface Mining and Reclamation Division (Staff). There remain no outstanding issues between the parties. Based on the information provided by the application, Staff analyses, and the inspection of the area, Staff recommends Phase III release of reclamation obligations on 261.3 acres. The parties have filed waivers of preparation and circulation of a proposal for decision.

After consideration of the application and the Findings of Fact and Conclusions of Law, the Commission approves the release of reclamation obligations as recommended by Staff. Alcoa does not request adjustment to the approved reclamation bond at this time and no new bond has been submitted. The Commission determines an eligible bond reduction amount of \$310,424.40 as calculated by Staff.

FINDINGS OF FACT

Based on the evidence in the record, the following Findings of Fact are made:

1. By letter dated July 20, 2016, the subject application requesting Phase III release on 261.3 acres within the Sandow Mine Area (Application), was submitted to the Commission's Surface Mining and Reclamation Division (SMRD and/or Staff) by Alcoa Inc. as the approved permittee under Permit No. 1F at the time of filing. Subsequently, Alcoa USA Corp. filed an application for transfer of the permit and submitted a replacement surety bond for Commission acceptance. By separate Orders dated August 1, 2017, the Commission approved the application for transfer and issued the permit, renumbered as Permit No. 1G, to Alcoa USA Corp. (Docket Nos. C17-0011-SC-01-B; C17-0007-SC-01-E).
2. The Application is made pursuant to Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2017) (Act), and the "Coal Mining Regulations," Tex. Railroad Comm'n, 16 TEX. ADMIN. CODE CH. 12 (Thomson West 2017) (Regulations). No filing fee is required. The Application was properly certified by Alcoa Inc. at the time filing [§12.312(a)(3)]. By letter dated August 8, 2017, Alcoa USA Corp., as the approved permittee under Permit No. 1G, affirmed it adopts the Application as its own and certified that the information contained therein is true and correct to the best of its knowledge [*Id.*].
3. The Application was filed with the Hearings Division by letter dated July 22, 2016. By letter dated August 2, 2016, Alcoa submitted a revised draft public notice and map for approval in response to the Administrative Law Judge's (ALJ) review by letter dated July 26, 2016. Staff declared the Application Administratively Complete by letter dated September 14, 2016. By letter dated December 20, 2016, Staff filed its Technical Analysis (TA) and the October 6, 2016 Field Inspection Report (Inspection Report) recommending approval of the bond release Application with no outstanding comments.

4. Alcoa does not request a reduction in the amount of the approved reclamation bond in the Application. The existing reclamation bond in the form of a surety bond issued by Federal Insurance Company, accepted by Order dated August 1, 2017, is in the amount of \$14,000,000 (Docket No. C17-0007-SC-01-E).
5. Copies of the Application were filed for public review at the main office of the Railroad Commission of Texas at 1701 North Congress, William B. Travis Building, Austin, Texas 78701, the office of the Milam County Clerk, 100 South Fannin, Cameron, Texas 75840 and the office of the Lee County Clerk, 151 East Hempstead Street, Giddings, Texas 78942.
6. Notice of application was published once a week for four consecutive weeks in the *Rockdale Reporter* circulated in Milam County on August 11, 18, 25 and September 1, 2016. The newspaper is a paper of general circulation in the area of the proposed bond release request area, Milam County. The notice of application contains all information required by the Act and Regulations for notice of an application requesting bond release. The published notice is adequate notification of the request for release. The notice includes the elements required by §134.129 of the Act and §12.312(a)(2) of the Regulations: the name of the permittee, the precise location of the land affected, the number of acres, permit number at the time of application and date approved, the amount of bond approved, the type and appropriate dates reclamation work was performed, and a description of the results achieved as they relate to the approved reclamation plan. The notice contains information on the applicant, location and boundaries of the permit area, the Application's availability for inspection, and the address to which comments should be sent. Alcoa submitted proof of publication to the Commission by letter dated September 9, 2016.
7. Alcoa sent notice of the Application to owners of interests within and adjacent to the areas requested for release. Alcoa also sent notice to local governmental bodies, planning agencies, sewage and water treatment authorities and water companies in the locality as

required by §12.312(a)(2) of the Regulations. The notice was provided via letters dated August 11, 2016. Alcoa mailed notice to the County Judge and Commissioners' Court of Milam County, Brazos River Authority, Texas General Land Office, Texas Commission on Environmental Quality, Natural Resources Conservation Service, Environmental Protection Agency, Texas State Soil and Water Conservation Board, Texas Department of Transportation, U.S. Army Corps of Engineers, Taylor Soil and Water Conservation District, Burleson-Lee Soil and Water Conservation District, Manville Water Supply Corp., Southwest Milam Water Service Company, Bartlett Electric, and Blue Bonnet Electric. The areas requested for release are not located within the territorial boundaries of any municipality that would be notified pursuant to §12.313(c) of the Regulations. Copies of the notification letters were filed with the Commission on September 12, 2016.

8. Staff provided notification of the Application by certified letters dated August 5, 2016 to the Milam County Judge and Lee County Judge. Mailing of notification was provided at least 31 days prior to the date of consideration of the docket by the Commission in accordance with §134.133 of the Act. Copies of the letters were provided in Attachment II of Staff's TA.
9. No adverse comments or written objections were filed regarding the request for release pursuant to the notification. No requests for hearing or informal conference were filed pursuant to §12.313(d).
10. Pursuant to §12.312(b) of the Regulations, Staff notified owners of interests in lands and lessees of the Application and the Office of Surface Mining Reclamation and Enforcement, Tulsa Field Office (OSM) by letters dated July 22, 2016 of the date and time of Staff's field inspection scheduled for August 10, 2016. The notification stated that a release had been requested and, pursuant to §12.312(b)(1), advised them of the opportunity to participate in the on-site inspection. Staff provided copies of the letters in Appendix II within Attachment III (Inspection Report) of the TA.

11. The inspection occurred on August 10, 2016 as scheduled. SMRD Inspection and Enforcement staff, accompanied by representatives of Alcoa, conducted its inspection of the area requested for release. The field report found that the proposed release areas were eligible for the requested release, pending Staff review.
12. The 8079.7-acre permit area is located approximately six miles southwest of Rockdale, Texas. The permit area is bordered to the east by State Highway 77. A general location map of the permit area, with the 261.3 acres proposed for release distinguished, is found in Appendix I of Staff's Inspection Report.
13. The 261.3 acres requested for release are located in Areas E, C, A, AX, and F of the Sandow Mine. The subject acreage is found wholly in Milam County.
14. Mining operations were conducted on the 261.3 acres proposed for release between 1985 and 2005. Various reclamation activities were conducted from 1987 through 2011 and as necessary for maintaining the area.
15. The Commission previously approved Phase I release of reclamation liability for the 261.3 acres requested by Orders dated November 8, 2011 (Docket No. C11-0005-SC-01-F), September 10, 2013 (Docket No. C12-0028-SC-01-F) and April 12, 2016 (Docket No. C14-0017-SC-01-F) for 0.39 acres, 258.87 acres and 2.04 acres, respectively. Phase II release for the subject acreage was approved by Order dated April 12, 2016 (Docket No. C14-0017-SC-01-F).
16. The approved postmining land use for the 261.3 acres proposed for Phase III release is industrial/commercial (I/C). The 261.3 acres were accepted into the January 10, 2013 extended responsibly area (ERA) as either pastureland or developed water resources (DWR) for which completion of the five-year extended responsibility period (ERP) for Phase III release is required. By letter dated March 31, 2016, Staff approved Revision No. 52 to Permit No. 1F that converted 453.3 acres, including the subject acreage, of approved

pastureland (382 ac.) and DWR (72 ac.) to I/C land use.¹ Accordingly, Alcoa is not required to complete the five-year ERP or comply with soil resampling requirements under the approved soil-testing plan prior to Phase III release of the subject acreage.

When the ERP was initiated in 2013, 18.4 of the 5,183.5 total acres within the ERA were approved for I/C postmine use. Acreage requested for release in the Application that was previously approved as DWR includes Pond 026 and associated structures. The surface area of Pond 026 is approximately 65.6 acres with a storage capacity of 936 acre-feet [Docket No. C4-0017-SC-01-B at Finding of Fact No. 40(b)(6)]. Additional acreage previously approved as DWR includes the East Yegua Creek Reroute that flows through Pond 026 and serves as its spillway structure, and a pre-Act pond referred to as "Duck Pond."

17. Alcoa is required to demonstrate that vegetative groundcover on the I/C land use acreage is adequate to control erosion in order to be eligible for Phase III release [§§12.395(b)(4) and 12.313(a)(3)]. By letter dated June 16, 2017, Alcoa submitted a vegetative groundcover report for I/C land use acreage in the A, AX, C, E and F Areas of the Sandow Mine. The report contains data collected during the 2016 growing season. By letter dated August 10, 2016, Staff found the data provided in the 2016 report indicates that groundcover on the subject acreage is sufficient to control erosion pursuant to §12.395(b)(4). Staff observed during its inspection of the area on August 10, 2016 that vegetation on the 261.3 acres is comprised primarily of Bermudagrass, Switchgrass, Kleingrass, Wilman lovegrass, Old world bluestem, Sideoats grama and Indiangrass. Road surfacing materials on the permanent roads within the proposed release area is composed of crushed gravel.
18. No portions of the areas proposed for Phase III release of reclamation liability were reclaimed as prime farmland [§§12.201 and 12.620-12.625].

¹ An additional 0.39 acres of undisturbed land within the proposed release area was approved for I/C use in Revision No. 59 by letter dated June 16, 2016.

19. The 261.3 acres requested for Phase III release of reclamation liability contain two impoundments (Pond 026 and Duck Pond), two diversions (Pond 026 Outlet and East Yegua Creek) and eight roads (C4 Ramp, RR-A1, RR 026, RR-C3, RR-C1, RR-North, ACE-1 and RR-A3). Photographs taken during Staff's field inspection on August 10, 2016 support Phase III release of the acreage requested and are provided in Appendix IV of Staff's Inspection Report (TA; Attachment III). Permanent impoundment Duck Pond is a pre-Act pond located within the proposed release area. All other permanent structures were approved prior to Phase II release granted by Order dated April 12, 2016 (Docket No. C14-0017-SC-01-F at Finding of Fact No. 17, Subparagraph 7).
20. By letter dated June 17, 2016, Alcoa submitted Revision No. 62 to Permit No. 1F requesting approval of small depressions D-13F-1 and D-13C-1 as permanent features. The structures were approved as a permanent postmine features by letter dated August 4, 2016. A copy of Staff's approval letter was filed in the docket on August 9, 2017. The small depressions are compatible with the approved postmine land use, are located on land owned by Alcoa, do not contribute to erosion, and do not affect the permanent developed water resources considered in the approved PHC determination for the Sandow Mine. Photographs taken during Staff's field inspection support Phase III release of the acreage requested and are provided as Photos Nos. 5 (D-13C-1) and 6 (D-13F-1) in Appendix IV of the Inspection Report (TA; Attachment III).
21. The groundwater hydrologic balance has been protected as required by §12.348 and the re-established postmine groundwater system is adequate for the approved postmine use of the 261.3 acres requested for Phase III release.
 - (1) In addressing requirements of §12.348, Alcoa has submitted groundwater monitoring data for the overburden, spoil and underburden aquifers within and adjacent to the Sandow Mine.
 - (2) Groundwater monitoring for the area proposed for Phase III release has been performed in accordance with the provisions of the approved permit. Long-term groundwater monitoring records have been reviewed by Staff on a quarterly basis.

- (3) The premine overburden aquifers in the reclaimed area have been destroyed; however, they constituted only minor aquifers. The underburden aquifers in the Sandow Mine area are sands of the Simsboro Formation, underlying the lignite bearing Calvert Bluff Formation. These underburden aquifers are separated from the underburden by clays five feet or more in thickness. The shallowest aquifers underlying these clays are thin, silty lenses interbedded with clays and lignite stringers that are limited laterally. The sandier unit (Simsboro) is separated from the mined and affected area by an underlay of several tens of feet to hundreds of feet in thickness and is fairly well developed in this region in the lower Wilcox Group outcrop.
- (4) Data from five spoil long-term groundwater monitoring (LTGM) wells near the proposed release areas indicate water quantity in the spoil has not be adversely affected by mining activities. In the A Area water level measurements obtained from well SP-36 show current levels have increased approximately 24 feet over the period of record (August 1994 – May 2016). Water level measurements observed from spoil LTGM wells SP-17 and SP-47 in the C Area show increases over the period of record (June 2005 – May 2016) of approximately 53 feet and 21 feet, respectively. In the F Area measurements obtained from spoil LTGM wells SP-21 and SP-22 show water level increases over the period of record (June 2005 – April 2016) of approximately 16 feet and 9 feet, respectively.
- (5) Water quality in the spoil has generally stabilized. Water quality data from the areas proposed for release show pH levels have displayed variability within acceptable ranges. Total dissolved solids (TDS), chloride and sulfate concentrations have fluctuated over the period of record in the A, C and F Areas. LTGM well SP-21 in the F Area has shown increasing trends in TDS and chloride as the water levels have increased in this well, but Staff notes increasing concentrations of these parameters is expected. As water levels increase,

concentrations of various parameters increase, reach a peak level and then decline as resaturation occurs.

- (6) Overburden LTGM wells near the areas proposed for release are located in the AX Area (AX2077), C Area (C-1RR-OB and C3-OB) and the F Area (F-2-OB and PZ-F70-26). Water level measurements obtained from LTGM AX2077 show the current water level is approximately 6.5 feet lower than initial measurement, but have displayed an upward trend since August 2005. In the C Area, water level measurements at LTGM well C-1RR-OB show the current level is approximately 10 feet lower than the initial measurement taken in March 2000 due to the well being located in an area that experienced extensive long-term depressurization pumping of the underburden aquifer. Since 2012, water levels have trended upward at well C-1RR-OB. At well C-3-OB, the water level has increased approximately 16 feet over the period of record (February 1995 – April 2016) and is currently stable. In the F Area measurements obtained over the period of record (August 1994 – April 2016) from overburden LTGM wells F-2-OB and PZ-F70-26 show water level increases of approximately 75 feet and 46 feet, respectively.
- (7) Water quality data analyzed from overburden LTGM wells in the C Area (C-1RR-OB and C-3-OB) indicates no problematic issues exist regarding pH levels or concentrations of TDS, chloride or sulfate. In the F Area, the parameters reported from LTGM wells F-2-OB and PZ-F70-26 have fluctuated within acceptable ranges over the period of record (August 1994 – April 2016). Analysis of data obtained from LTGM well AX2077 indicates an upward trend in TDC, chloride and sulfate concentrations since 2004. Increases in these parameters was expected in the approved probable hydrologic consequences (PHC) determination and the cumulative hydrologic impact assessment (CHIA) for the Sandow Mine.
- (8) Underburden LTGM wells near the proposed release areas are located in the AX Area (AX2077A), C Area (SW-2 UB and P3-R) and F Area (F74-5 and SW-1).

Current water levels obtained from LTGM wells in the AX and C Areas show increases from initial measurements ranging from 41.5 feet to 78 feet. In the F Area, the current water levels at LTGM wells F74-5 and SW-1 show decreases of approximately 38 feet and 68 feet, respectively, when compared to initial measurements. Water levels observed at both wells initially trended downward, but began to trend upward and have demonstrated stability since at least 2008.

- (9) The data reported from the five underburden LTGM wells indicates there are no impediments to release regarding water quality of the underburden. The observed pH levels have fluctuated within acceptable ranges. TDS, chloride and sulfate concentrations have remained consistent with initial measurements or have generally trended downward.
 - (10) Reclaimed area water quality appears to have followed trends expected from the groundwater PHC determination and Staff's CHIA for the Sandow Mine Area. Groundwater systems adjacent to the areas proposed for release have not been impacted by deterioration in water quality or quantity due to mining and reclamation activities conducted under the approved permit.
22. Alcoa has conducted surface mining activities in accordance with §12.313(a)(3) and §12.349 to protect surface water quality and quantity for the acreage proposed for Phase III release.
- (1) The 261.3 acres proposed for release from reclamation liability are located in the north area of the mine. Runoff from the proposed release areas is drained by East Yegua Creek (Stream Segment 1211).
 - (2) All discharge from the Sandow Mine flows to Somerville Lake on Yegua Creek (TCEQ Stream Segment No. 1212) and ultimately to the Brazos River.

- (3) TCEQ issued TPDS Permit No. 00395 to Alcoa for wastewater discharges from the Sandow Mine. During the period of record, runoff from the areas proposed for release drains to the North and E-Area End Lakes. Long-term data and quarterly pond data are typically provided and analyzed as described in Advisory Notice AD-BO-312 in support of Phase II release from reclamation obligations; therefore, Staff did not consider any long-term data from final discharge ponds and quarterly pond data from permanent impoundments in its review of the Application. A discussion of water quality data associated with ponds in the area requested for release is provided in the Order approving Phase II release (Docket No. C14-0017-SC-01-F at Finding of Fact No. 21).
- (4) Runoff from all disturbed areas at the Sandow Mine is monitored under the TPDES Permit, applicable stream segment criteria and provisions outlined in the approved long-term surface water monitoring program in Permit No. 1G.
- (5) In support of Phase III release from reclamation obligations, Alcoa provided long-term surface water monitoring (LTSM) data from LTSM stations located throughout the permit area. Staff, in its TA, limited its evaluation to LTSM Station Nos. WQMP1, 6, 7 and 13. These stations are located near the proposed release areas and are used to monitor discharges upstream and downstream of the 261.3 acres which allows for a comparison of the water quality between areas that have been disturbed by mining activities and areas that were undisturbed by mining related activities. LTSM Station Nos. WQMP1 and 6 monitor undisturbed runoff and are located on East Yegua Creek and Country Club Creek, respectively. LTSM Station Nos. 7 and 13 monitor disturbed runoff from the proposed release areas and are located on East Yegua Creek.
- (6) The approved LTSM plan requires that LTSM Station Nos. WQMP1, 6, 7 and 13 be sampled for flow (Q), pH, total dissolved solids (TDS), total suspended solids (TSS), total iron (Fe), total manganese (Mn), sulfate and chloride.

- (7) Staff, in its TA, determined the parcel proposed for release did not have a negative impact on surface water quality by comparing the water quality of disturbed and undisturbed LTSM stations through an evaluation of (1) baseline surface water data, (2) applicable stream segment criteria to include Federal and State effluent standards, (3) the probable hydrologic consequences (PHC) determination by the permittee and (4) the Cumulative Hydrologic Impact Assessment (CHIA) estimates by Staff for specific mass-balance points.
- (i). The average pH levels observed during the monitoring period at undisturbed LTSM Station No. 6 [7.0 standard units (s.u.)] and disturbed LTSM No.7 (7.6 s.u.) are equal to the averages observed at these stations during the baseline period. The pH range at disturbed LTSM Station Nos. 7 and 13 are within the established TCEQ stream segment criteria (6.5 s.u. – 9.0 s.u).
 - (ii). The average TDS concentrations at disturbed LTSM Station No. 7 (565.6 mg/L) is lower than the average observed at this station during the baseline period (1,724.9 mg/L). The flow-weighted TDS concentrations at disturbed LTSM Station No. 7 have trended upward over the period of record. However, the highest TDS concentrations observed at LTSM Station No. 7 occurred from 1979 to 1991 and began to decline between 1991 and 2008 due to discharge of water from depressurization activities into East Yegua Creek. The flow-weighted average TDS concentration calculated for LTSM Station No. 7 (509.1 mg/L) is less than the maximum annual average concentration for Stream Segment No. 1211 (640 mg/L, Yegua Creek) but exceeds the maximum annual average established for Stream Segment No. 1212 (400 mg/L, Somerville Lake).

- (iii). The average TSS concentration observed during the monitoring period at undisturbed LTSM Station No. 6 (13.4 mg/L) and disturbed Station No. 7 (18.3 mg/L) are lower than the baseline averages observed at these stations. The ranges applicable to these stations are also lower than the baseline. At disturbed LTSM Station No. 13 TSS concentration averages 29.7 mg/L and ranges from 4.0 mg/L to 491.0 mg/L, higher than TSS concentration upstream at LTSM Station No. 7. Flow-weight averages attributable to LTSM Station No. 7 depict a steady trend over the period of record.

- (iv). The average Fe concentration observed during the monitoring period at undisturbed LTSM Station No. 6 (0.8 mg/L) is lower than the baseline average (2.0 mg/L), and the maximum concentration (2.4 mg/L) is lower than the maximum observed during the baseline (3.7 mg/L). At disturbed LTSM Station No. 7 the average Fe concentration (0.7 mg/L) is similar to the baseline (1.0 mg/L), but the maximum observed during the monitoring period (4.2 mg/L) is higher than the baseline maximum (1.8 mg/L). However, the available data indicates that Fe concentrations at LTSM Station No. 7 have remained at or below 0.15 mg/L since September 2009.

- (v). The average Mn concentration observed during the monitoring period at undisturbed LTSM Station No. 6 (0.3 mg/L) is higher than the baseline average (0.1). At undisturbed LTSM Station No. WQMP1, the Mn average Mn concentration is 1.1 mg/L and ranges from 0.01 mg/L to 6.1mg/L. At disturbed LTSM Station No. 7 the average Mn concentration (0.7 mg/L) and range (0.01 mg/L to 41.1 mg/L) is greater than those observed during the baseline period at this station and those observed at the undisturbed stations during the monitoring period. This is expected as LTSM Station No. 7 is located downstream of areas previously disturbed by mining activities. However, a single Mn concentration collected on April 13, 2004

(41.1 mg/L) distorts the analysis. Once this outlier is removed from the data set the Mn concentration average for LTSM Station No. 7 is lower than the baseline Mn concentration averages at undisturbed LTSM Station Nos. 6 and WQMP1, suggesting that mining activities in the proposed release areas have not resulted in discernible impacts to Mn levels in surface water.

- (vi). No baseline data for sulfate is available for LTSM Station Nos. 6 and 7. The average sulfate concentration observed during the monitoring period at disturbed LTSM Station No. 7 is 210.6 mg/L and the range is 17.0 mg/L to 888.0 mg/L. The average is higher than the stream segment criterion for sulfate concentration established for Stream Segment Nos. 1211 (East Yegua Creek) and 1212 (Somerville Lake). A comparison of LTSM data for undisturbed LTSM Station No. WQMP1 to the baseline data for the same stations shows that the baseline average sulfate concentration (415.9 mg/L) is less than the average sulfate concentration observed during the monitoring period (615.4 mg/L) and the baseline range (9.0 mg/L to 1,150.0 mg/L) is less than the monitoring period sulfate concentration (75.0 mg/L to 2,350.0 mg/L). Alcoa and Staff concludes these increases at a LTSM station monitoring undisturbed areas indicates that sulfate concentrations are naturally occurring and are the result of the movement of sulfate materials in runoff. At disturbed LTSM Station No. 13, downstream of the permit boundary, the average sulfate concentration observed during the monitoring period (124.9 mg/L) shows that some dilution is occurring as flows progress downstream. Further, disturbed LTSM Station No. 7 has exhibited a decreasing trend in sulfate concentration since 2014.
- (vii). No baseline data for chloride is available for LTSM Station Nos. 6 and 7. The average chloride concentration observed during the monitoring period at disturbed LTSM Station No. 7 is 92.0 mg/L and the range is 25.0 mg/L to 223.0 mg/L. The established range can exceed the stream segment

criterion for chloride concentration for Stream Segment Nos. 1211 (East Yegua Creek) and 1212 (Somerville Lake). A comparison of LTSM data for undisturbed LTSM Station No. WQMP1 to the baseline data for the same stations shows that the baseline average chloride concentration (116.0 mg/L) is less than the average chloride concentration observed during the monitoring period (300.5 mg/L) and the baseline range (2.0 mg/L to 359.0 mg/L) is less than the monitoring period chloride concentration (44.0 mg/L to 1,250.0 mg/L). At disturbed LTSM Station No. 13, downstream of the permit boundary, the average sulfate concentration observed during the monitoring period (82.3 mg/L) shows that some dilution is occurring as flows progress downstream. Further, disturbed LTSM Station No. 7 has exhibited a decreasing trend in chloride concentration since 2014.

- (8) No negative impacts to water quality are anticipated from flows leaving the proposed release area. Alcoa indicates that water quality in the C-Area End Lake will influence TDS concentrations in East Yegua Creek. TDS readings in the lake observed between April 17, 2013 and May 16, 2013 show an average of 768 mg/L. Staff and Alcoa expect TDS concentrations at downstream LTSM Station 7 to remain near levels observed during recent water samples and below baseline and early monitoring data indicating water quality has been protected as predicated in the approved surface water PHC determination in the permit.

Runoff from the 261.3 acres proposed for release in the north area of the Sandow mine drains to the North and E-Area End Lakes. These end lakes are covered under Water Rights Permit No. 5540. Alcoa provides an analysis of surface water quantity in comparison to the approved PHC determination in the permit. In the analysis, Alcoa indicates that increases in surface water runoff will mitigate increases in evaporative losses. Based on premine and postmine conditions considered in Table 146-25, Alcoa estimates the annual evaporation losses (1,817 acre-feet/year) for all permanent impoundments to be approximately 2% in

comparison to the combined average flows of USGS Stations 08109700 and 08109800 on East and Middle Yegua Creeks (84,000 acre-feet/year).

The Cumulative Hydrologic Impact Assessment (CHIA) for this mine is contained in Staff's TA for the Three Oaks Mine (Docket No. C1-0004-SC-00-A, Permit No. 48; TA Addendum No. 2, January 24, 2002). The CHIA identifies a defined cumulative impact area (CIA) that includes the Sandow Mine. Material damage criteria within the CIA are based on baseline surface water information contained in the permit, TCEQ stream-segment criteria, drinking water standards, and TPDES wastewater discharge permit standards. In its CHIA Staff indicates that the effects of mining on the TDS concentrations measured at mass-balance location No. 2 (East Yegua Creek) could be as high as 223 mg/L, and anticipates a maximum increase in TDS concentration at Somerville Lake to 230 mg/L. Anticipated TDC concentrations at both locations are within the maximum annual average concentration for Stream Segment No. 1212 (440 mg/L). The flow-weighted TDS concentration observed at LTSM Stations 6 (undisturbed) and 7 (disturbed) somewhat exceed the TDS concentrations predicted downstream at Somerville Lake, but have shown a downward trend following discharges of water from depressurization activities into East Yegua Creek beginning in 1991.

23. No wells are located within the proposed release areas [§12.333].
24. The areas requested for release of reclamation obligations are capable of sustaining the postmine land uses. Monthly inspections and Staff's inspection on August 10, 2016 demonstrate that the land has been reclaimed to and managed in accordance with the approved postmine land uses.

25. The 261.3 acres proposed for Phase III release are bonded at the mined rate of \$1,080/acre. If the Application is approved by the Commission, as proposed, Alcoa would be eligible to reduce its performance bond obligations by \$310,424.40, as shown in the following table:

Bond Reduction as Proposed

Phase Requested	Area Acres	Disturbance Category	Bonded Per Acre	Eligible Reduction Per Acre	Eligible Reduction
Phase III	261.3	Mined	\$1,080.00	\$1,080.00	\$282,204.00
Admin. Costs (10%)					\$28,220.40
Total	261.3				\$310,424.40

26. The eligible bond reduction amount, based upon the Findings of Fact contained in this Order and Staff calculations, with which Alcoa agrees, is \$310,424.40. No reduction of the \$14,000,000 surety bond approved by Order dated August 1, 2017 is requested in this Application.
27. All acres requested for release were marked in the field to distinguish them from active mining and reclamation areas.
28. Alcoa and Staff, the only parties to the proceeding, filed waivers of the preparation and circulation of a proposal for decision. The proposed order was circulated to the parties with opportunity for comment. No exceptions to the proposed order were filed.
29. Open meeting notice has been posted for Commission consideration of this Application in accordance with TEX. GOV'T CODE ANN. CH. 551 (Vernon Supp. 2017).

CONCLUSIONS OF LAW

Based on the above Findings of Fact, the following Conclusions of Law are made:

1. Proper notice of application and notice of consideration by the Commission has been provided for this request for release of reclamation obligations.
2. No public hearing was requested, and none is warranted.
3. Alcoa has complied with all applicable provisions of the Act and the Regulations regarding notice for Commission jurisdiction to attach to allow consideration of the matter.
4. Alcoa has complied with all applicable provisions of the Act and the Regulations for the acreage requested for release as set out in the Findings of Fact.
5. The Commission may approve a release of Phase III reclamation obligations for the 261.3 acres, as set out in the above Findings of Fact and Conclusions of Law.
6. An eligible bond reduction amount of \$310,424.40 for use in reclamation cost estimates may be determined.

IT IS THEREFORE ORDERED BY THE RAILROAD COMMISSION OF TEXAS that the above Findings of Fact and Conclusions of Law are adopted;

IT IS FURTHER ORDERED a release of Phase III reclamation obligations for 261.3 acres is hereby approved;

IT IS FURTHER ORDERED that the current bond remains in effect in accordance with its terms until a replacement bond is approved by the Commission;

IT IS FURTHER ORDERED that, as a result of the Phase III release of 261.3 acres, the Commission approves an eligible bond reduction amount of \$310,424.40;

IT IS FURTHER ORDERED that the Commission may vary the total amount of bond required from time to time as affected land acreage is increased or decreased or where the cost of reclamation changes;

IT IS FURTHER ORDERED that the areas shall continue to be marked in the field to assist in future field inspections of other areas; and

IT IS FURTHER ORDERED by the Commission that this Order shall not be final and effective until 25 days after a party is notified of the Commission's Order. If a timely motion for rehearing is filed by any party of interest, this Order shall not become final and effective until such motion is overruled, or if such motion is granted, this Order shall be subject to further action by the Commission. As authorized by TEX. GOV'T CODE § 2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law, is hereby extended until 90 days from the date the parties are notified of the order.

SIGNED this 19th day of September, 2017.

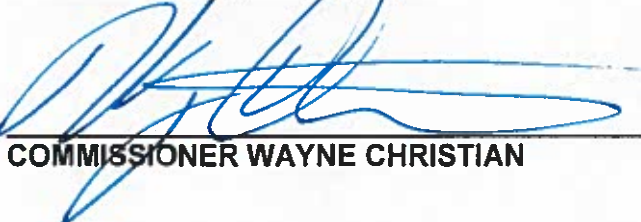
RAILROAD COMMISSION OF TEXAS



CHAIRMAN CHRISTI CRADDICK



COMMISSIONER RYAN SITTON



COMMISSIONER WAYNE CHRISTIAN

ATTEST:


Secretary, Railroad Commission of Texas

