Statement of Basis

Permit to Construct No. P-2021.0036
Project ID 62668

Itafos Conda LLC
Soda Springs, Idaho

Facility ID 029-00003

Final

January 12, 2022 CB
Christina Boulay
Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
FEC	Facility Emissions Cap
FSA	fluosilicic acid, hydrofluosilicic acid, or H2SiF6
GACT	Generally Available Control Technology
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides

NSPS	New Source Performance Standards
O&M	operation and maintenance
O_2	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
PW	process weight rate
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
RICE	reciprocating internal combustion engines
Rules	*Rules for the Control of Air Pollution in Idaho*
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
yd^3	cubic yards
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

Itafos Conda LLC, Soda Springs, is a facility located at 3010 Conda Road in Soda Springs, Idaho 83276. The facility produces multiple phosphate fertilizer products and alters its product mix to meet the changing requirements of its customers. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit PM_{10}, SO_2, NO_x and CO above the major source threshold of 100 tons-per-year. The facility is also classified as a major facility, as defined by Subsection 008.10.a, because it emits or has the potential to emit hydrogen fluoride above the major source thresholds of 10 tons-per-year for any single HAP and 25 tons-per-year for any combination of HAP. This PTC will be incorporated into the current Tier I permit upon issuance of this permit in accordance with 58.01.01.209.05.c.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

Tier I Operating Permit History

January 30, 2019	T1-2016.0015, Tier I permit renewal, Permit status (A)
January 12, 2012	T1-060308, Incorporating NESHAP Subpart ZZZZ (S)
March 4, 2011	T1-060308, Permit Renewal, Permit status (S)
April 28, 2006	Tier I No. T1-040321, amended permit to incorporate changes in PTC No. P-040320. This permit was superseded by Tier I No. T1-060308 (S)
April 8, 2005	Tier I No. T1-040308, modified permit to incorporate changes in PTC No. P-040307. This Tier I permit was superseded by permit No. T1-040321 (S)
September 23, 2003	Tier I No. 029-00003, amendment to remove the Experimental Silica Plant (S)

Permit History

December 23, 2021	PTC No. P-2021.0036, Initial permit for the hydrofluosilicic acid production and loadout process, (A)
October 15, 2018	PTC No. P-2018.0001, B5 Boiler, to correct a NOx emission limitation (A)
January 12, 2018	PTC No. P-2010.0002, Gyp Stacks 0, 1, 2, Ownership Change to ITAFOS (A)
January 12, 2018	PTC No. P-2018.0001, B5 Boiler, Ownership Change to ITAFOS (S)
January 12, 2018	PTC No. P-2017.0050, Gyp Stack 3, Ownership Change to ITAFOS (A)
January 12, 2018	PTC No. P-2013.0001, Super Phos. Acid 3, Ownership Change to ITAFOS (A)
January 12, 2018	PTC No. P-2009.0068, Phos. Acid, Granulation, Cleaver- Brooks Boiler, Ownership Change to ITAFOS (A)
January 12, 2018	PTC No. P-2009.0002, East Sulfuric Acid, Ownership Change to ITAFOS
November 17, 2017	PTC No. P-2017.0050, Initial PTC for Gyp Stack 3 (S)
May 20, 2013	PTC No. 2013.0001, Initial PTC for Super Phos. Acid 3 (S)
October 14, 2010	PTC No. P-2009.0068 to reduce SPA production limit since changes under P-040320 were not completed, and revise SPA Oxidation monitoring, and revise existing PTC conditions to be consistent with the Tier I OP (S)

March 25, 2010	PTC No. P-2010.0002; modified PTC for the East Sulfuric Acid Plant. The No. 2 absorbing tower is replaced, cesium catalyst is added to the fourth bed of the converter, the final absorbing tower heat exchanger is replaced, the cold interpass heat exchanger is upgraded, the product cooler is replaced, and acid pumps are upgraded. (S)
February 20, 2009	PTC No. P-2009.0002 issued as a PTC revision for the West Gyp Stack II project; includes improved monitoring, lower pond size and emission limits (S)
December 19, 2007	PTC No. P-2007.0170 for the initial West Gyp Stack II project (S)
August 22, 2007	PTC No. P-060310, revised PTC SPA Oxidation Process changes and to incorporate granulation plant changes from PTC No. P-060324. This PTC is superseded by PTC No. P-2009.0068 (S).
December 21, 2006	PTC No. P-060324, revised PTC issued for drum replacement at the Granulation Plant. This PTC was superseded by PTC No. P-060310 (S).
April 28, 2006	PTC No. P-040320, production increase at SPA and improved monitoring for the SPA Oxidation Process. This PTC was superseded by PTC P-060310 (S).
July 22, 2005	PTC No. P-050312 for the initial West Gyp Stack I project; public notice was per Section 209.05.a, so this PTC will be incorporated into the Tier I during renewal; this PTC was superseded by PTC No. P-2007.0170 (S).
December 10, 2004	PTC No. P-040307, for East Sulfuric Acid Plant SO2 monitoring changes. This PTC was superseded by PTC No. P-1010.0002 (S).

Application Scope

This PTC is for a modification at an existing Tier I facility. See the current Tier I permit statement of basis for the permitting history.

The applicant has proposed to:

- Operate an existing wet scrubber to assist in the FSA (fluosilicic acid) recovery process.
  FSA (fluosilicic acid, hydrofluosilicic acid, or H2SiF6) is a common by-product of phosphate fertilizer production, which typically resides in phosphogypsum pond systems, is responsible for fluoride emissions from the plant, and contributes to the low pH characteristics of pond water. FSA will be recovered as a 25% solids-free solution and sold, primarily to the municipal water fluoridation market in the U.S. The FSA recovery process will be placed within the existing "PPA" evaporator process – between the entrainment separator and the barometric condenser. Existing tank vapors are collected and sent to the Conditioning vent (previously known as the Secondary Phosphoric Acid Plant stack, or PPA). To recover FSA, Itafos will install a new separation vessel, recirculation tank, and pump. While the installed equipment is a mostly closed system, the FSA recovery process will result in emissions of fluorides from the existing conditioning vent scrubber stack, from vapors collected from the FSA recirculation tank, 52% Hotwell, and the FSA storage tanks. FSA vapor emissions, expressed as fluoride emissions, will also occur during the transfer of FSA into railcars and/or tanker trucks for shipping.

Application Chronology

July 15, 2021	DEQ received an application.
July 20, 2021	DEQ received an application fee.
August 20, 2021	DEQ determined that the application was complete.
September 14, 2021	DEQ made available the draft permit and statement of basis for peer and regional office review.
October 8, 2021	DEQ made available the draft permit and statement of basis for applicant review.

October 19, 2021	DEQ received the permit processing fee.
October 28 – November 29, 2021	DEQ provided a public comment period on the proposed action.
December 7, 2021	DEQ provided the proposed permit and statement of basis for EPA review.
January 12, 2022	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source ID No.	Sources	Control Equipment
35-11-009/430	FSA Recovery Process	Conditioning Vent Wet Scrubber(existing): Manufacturer: Indusco Liquid to gas ratio: 0.073, or greater
	FSA Loading into Railcars and Trucks	None

Emissions Inventories

As presented in Table 8 the pre-project facility-wide potential to emit exceeds 100 T/yr for PM_{10}, NO_X, and CO, and 250 T/yr for SO_2. Therefore, a PSD applicability analysis is required for this project.

Projected Actual Emissions

The procedure used by Itafos Conda LLC for calculating Projected Actual emissions was the calculation approach for the installation of new units set forth in 40 CFR 52.21, beginning with definitions in 52.21(b)(41). Using these procedures, Projected Actual criteria pollutant emissions and fugitive source emissions were calculated. Projected Actual emissions are presented in the following table:

Table 2 PROJECTED ACTUAL EMISSIONS

Source	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources Affected by this Permitting Action						
FSA Recovery Process	0.0	0.0	0.0	0.0	0.0	0.01
Total, Point Sources	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**
Fugitive Sources						
FSA Loading into Railcars and Trucks	0.0	0.0	0.0	0.0	0.0	2.69
Total, Fugitive Sources	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.69**
Facility Totals						
Total, Projected Actual Emissions	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**

Baseline Actual Emissions

The procedure used by Itafos Conda LLC for calculating Baseline Actual emissions was the calculation approach for the installation of new units set forth in 40 CFR 52.21, beginning with definitions in 52.21(b)(48). Using these procedures, Baseline Actual criteria pollutant emissions and fugitive source emissions were calculated. Baseline Actual emissions are presented in the following table:

Table 3 BASELINE ACTUAL EMISSIONS

Source	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources Affected by this Permitting Action						
FSA Recovery Process	0.0	0.0	0.0	0.0	0.0	0.00
Total, Point Sources	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Fugitive Sources						
FSA Loading into Railcars and Trucks	0.0	0.0	0.0	0.0	0.0	0.00
Total, Fugitive Sources	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Facility Totals						
Total, Baseline Actual Emissions	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Project Emissions Increase

The project emissions increase is presented in the following table:

Table 4 PROJECT EMISSIONS INCREASE

Emissions	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
Projected Actual Emissions	0.0	0.0	0.0	0.0	0.0	2.70
Baseline Actual Emissions	0.0	0.0	0.0	0.0	0.0	0.00
Project Emissions Increase	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**

Comparison of the Project Emissions Increase to the PSD Significance Thresholds

The comparison of the change in projected actual emissions from baseline actual emissions to the PSD significance thresholds is presented in the following table.

Table 5 COMPARISON OF THE PROJECT EMISSIONS INCREASE TO THE PSD MAJOR MODIFICATION THRESHOLDS

Emissions	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
Project Emissions Increase	0.0	0.0	0.0	0.0	0.0	2.70
PSD Significance Threshold	**15**	**40**	**40**	**100**	**40**	**3.0**
Does the Project Emissions Increase Exceed the PSD Major Modification Threshold?	No	No	No	No	No	No

As presented in the preceding table this project does not constitute a PSD Major Modification and is not subject to PSD permitting requirements.

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit an emission inventory was developed for the wet scrubber operations at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, HAP PTE were based on emission factors from EPA's method for splash loading section 5.2 and the most recent facility source test with a maximum of 70,000 gallons per day produced, and process information specific to the facility for this proposed project. The FSA recovery process will result in Flouride emissions from the existing conditioning vent wet scrubber and loading into railcars and trucks.

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

This is an existing PSD facility. However, since this is the first time the facility is receiving a permit for this process. This permitting action does not change any facility-wide criteria pollutants. The facility-wide criteria pollutant emissions listed below have previously been determined in permitting action T1-2016.0015 issued January 30, 2019. This permitting action is only for the FSA recovery process and loading, which generated Fluoride emissions.

The following table presents the pre-project potential to emit for all criteria pollutants from all emissions units at the facility as verified by DEQ staff. See Appendix A for a detailed presentation of the calculations for the FSA recovery process in this permitting action.

Table 6 PRE-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]
Facility-Wide Emissions	143.3	38.38	737.89	215.44	173.08	11.27	3.80
FSA Recovery Process and FSA Loading into Railcars and Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pre-Project Totals	**143.30**	**38.38**	**737.89**	**215.44**	**173.08**	**11.27**	**3.80**

a) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as determined by DEQ staff. This permitting action does not change any facility-wide criteria pollutants. The facility-wide criteria pollutant emissions listed below have previously been determined in permitting action T1-2016.0015 issued January 30, 2019. This permitting action is only for the FSA recovery process and loading, which generated Fluoride emissions. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 7 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]	T/yr[(a)]
Facility-Wide Emissions	143.30	38.38	737.89	215.44	173.08	11.27	3.80
FSA recovery process	0.00	0.00	0.00	0.00	0.00	0.00	2.70
FSA Loading into Railcars and Trucks							
Post Project Totals	**143.30**	**38.38**	**737.89**	**215.44**	**173.08**	**11.27**	**6.50**

a) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 8 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	Fluoride
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Pre-Project Potential to Emit	143.30	38.38	737.89	215.44	173.08	11.27	3.80
Post Project Potential to Emit	143.30	38.38	737.89	215.44	173.08	11.27	6.50
Changes in Potential to Emit	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**

Non-Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of non-carcinogenic toxic air pollutants (TAP) is provided in the following table.

Pre- and post-project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

Table 2 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS

Non-Carcinogenic Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Fluorides, as F	0.00E+03	1.30	1.3000	0.167	Yes

Some of the changes in emissions rates for non-carcinogenic TAP exceeded the screening level as a result of this project. Therefore, modeling is required for Fluorides, as F because the 24-hour average non-carcinogenic screening ELs identified in IDAPA 58.01.01.585 were exceeded.

Ambient Air Quality Impact Analyses

As presented in the Modeling Memo in Appendix B, the estimated emission rate of a TAP from this project were below applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline[1]. Refer to the Emissions Inventories section for additional information concerning the emission inventories.

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of the Ambient Air Impact Analysis for TAP is provided in Appendix A.

[1] Criteria pollutant thresholds in Table 2, State of Idaho Guideline for Performing Air Quality Impact Analyses, Doc ID AQ-011, September 2013.

An ambient air quality impact analyses document has been crafted by DEQ based on a review of the modeling analysis submitted in the application. That document is part of the final permit package for this permitting action (see Appendix B).

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Caribou County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.

SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.

SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.

UNK = Class is unknown.

For All Other Pollutants:

A = Use when permitted emissions of a pollutant are > 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.

UNK = Class is unknown.

Table 3 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM_{10}	>100	>100	**100**	A
$PM_{2.5}$	>100	>100	**100**	A
SO_2	>100	>100	**100**	A
NO_X	>100	>100	**100**	A
CO	>100	>100	**100**	A
VOC	<100	<100	**100**	B
HAP (single)	>100	>100	**10**	A
Total HAPs	>100	>100	**25**	A

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 ..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed new emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 ..... Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 ..... Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 ..... Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility have a potential to emit greater than 100 tons per year for PM_{10}, SO_2, NO_X, CO, and 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, this facility is classified as a major facility, as defined in IDAPA 58.01.01.008.10.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 ..... Prevention of Significant Deterioration of Air Quality

The facility is a designated source (phosphate rock processing plant) and has PM_{10}, SO_2, NO_x and CO emissions greater than 100 tons per year. The facility is an existing PSD source.

NSPS Applicability (40 CFR 60)

This permitting action does not affect the previously established applicable federal regulations.

The facility is subject to the following NSPS:

40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

A detailed regulatory review of these subparts can be found in the current Tier I permit. DEQ is delegated these subparts.

NESHAP Applicability (40 CFR 61)

This permitting action does not affect the previously established applicable federal regulations:

The facility is subject to the following NESHAP:

40 CFR 61 Subpart R - National Emission Standards for Radon Emissions From Phosphogypsum Stacks. All of the provisions included in this subpart are applicable to the permittee. DEQ is not delegated this subpart.

A detailed regulatory review of these subparts can be found in the current Tier I permit. DEQ is delegated these subparts.

MACT Applicability (40 CFR 63)

This permitting action does not affect the previously established applicable federal regulations**:**

The facility is subject to the following MACT:

40 CFR 63 Subpart AA - National Emission Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants

40 CFR 63 Subpart BB - National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizers Production Plants

40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

A detailed regulatory review of these subparts can be found in the current Tier I permit. DEQ is delegated these subparts.

Permit Conditions Review

This section describes the permit conditions for this initial permit that have been added as a result of this permitting action.

Initial Permit Condition 1.1

This permit condition describes the scope of the project and also lists the regulated sources under Table 1.1.

Initial Permit Condition 2.1

This permit condition describes the process description at the facility for the FSA recovery process.

Initial Permit Condition 2.2

This permit condition describes the emission unit description and the associated control devices for the FSA recovery process.

Initial Permit Condition 2.3

This permit condition lists the emission limit for the FSA recovery process. This process only results in Fluoride, as F, emissions. This emission is a 24-hour toxic air pollutant and a regulated PSD pollutant that has a standard emission limit (SEL) at 3 T/yr. Therefore, the pound per hour and tons per year shall be listed in the permit.

Initial Permit Condition 2.4

This permit condition describes the opacity limit for the FSA recovery process.

Initial Permit Condition 2.5

This permit condition lists the daily FSA production limit as to demonstrate compliance with the fluoride, as F, emission limit permit condition.

Initial Permit Condition 2.6

This permit condition lists the daily FSA production limit monitoring requirement as to demonstrate compliance with the fluoride, as F, emission limit permit condition.

FSA emissions (as F) are primarily exhausted to the atmosphere from the rail car and/or tank truck filling hatch. A small amount of fluoride emissions are also exhausted to the atmosphere from the Conditioning Vent Scrubber. Up to 70,000 gallons of FSA per day will be loaded into railcars and/or tanker trucks. Railcar filling can occur at one of two filling stations located adjacent to each other; tanker truck filling will occur at a separate loadout station adjacent to (south of) the railcar loadout station. Figure 1 in Section 3.3 of this memorandum illustrates the locations of these modeled emission sources. Only one railcar or tanker truck will be filled at any one time. Therefore, to keep the total FSA loading at or less than 70,000 gallons per day, a total of 46 unique combinations could occur in any given day, from as many as five railcars (and zero tanker trucks) to as many as 15 tanker trucks (and zero railcars):

The following six loading conditions were modeled.

- Filling five railcars can be combined with zero tank trucks before exceeding 70,000 gallons/day;
- Filling four railcars can be combined with up to 3 tank trucks before exceeding 70,000 gallons/day;
- Filling three railcars can be combined with up to 6 tank trucks before exceeding 70,000 gallons/day;
- Filling two railcars can be combined with up to 9 tank trucks before exceeding 70,000 gallons/day;
- Filling one railcar can be combined with up to 12 tank trucks before exceeding 70,000 gallons/day; and
- With zero railcars filled, up to 15 tank trucks can be loaded before exceeding 70,000 gallons/day.

This assessment determined the possible combinations leading to loading up to 70,000 gallons per day; any combinations less than those identified here would result in lower predicted impacts. The limiting condition of 70,000 gallons per day will demonstrate compliance with the applicable TAP requirements.

Initial Permit Condition 3.1

The duty to comply general compliance provision requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Initial Permit Condition 3.2

The maintenance and operation general compliance provision requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.3

The obligation to comply general compliance provision specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Initial Permit Condition 3.4

The inspection and entry provision requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Initial Permit Condition 3.5

The permit expiration construction and operation provision specifies that the permit expires if construction has not begun within two years of permit issuance or if construction has been suspended for a year in accordance with IDAPA 58.01.01.211.02.

Initial Permit Condition 3.6

The notification of construction and operation provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.01 and 211.03.

Initial Permit Condition 3.7

The performance testing notification of intent provision requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Initial Permit Condition 3.8

The performance test protocol provision requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Initial Permit Condition 3.9

The performance test report provision requires that the permittee report any performance test results to DEQ within 60 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Initial Permit Condition 3.10

The monitoring and recordkeeping provision requires that the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.11

The excess emissions provision requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130-136.

Initial Permit Condition 3.12

The certification provision requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Initial Permit Condition 3.13

The false statement provision requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Initial Permit Condition 3.14

The tampering provision requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Initial Permit Condition 3.15

The transferability provision specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Initial Permit Condition 3.16

The severability provision specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

PUBLIC REVIEW

Public Comment Period

A public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, comments were not submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

EPA REVIEW

EPA REVIEW OF PROPOSED PERMIT

As required by IDAPA 58.01.01.366, DEQ provided the proposed permit to EPA Region 10 for its review and comment on December 7, 2021 via the online the Electronic Permit System (EPS). On December 8, 2021, EPA Region 10 responded to DEQ via e-mail indicating the permit was not reviewed and EPA will not object to its issuance.

APPENDIX A – EMISSIONS INVENTORIES

L (lb/1000 gal) = 12.46 * (S*P*M)/T (AP-42 equation for liquid loading)

where:

S = loading factor =	1.45	for splash loading
P = Vapor pressure of material (psia)		
M = Molecular weight of material		
T = Temperature of material (deg R)		

Liquid being loaded contains 25% H2SiF6

P for H_2SiF_6 = 24 mmHg@77 deg F, or	0.464	psia
M for H_2SiF_6 =	144	
T = 77 deg F, or 537 deg R	537	deg R
M for F =	19	
L (lb/1000 gal) = 12.46 * (1.45 * 0.464 * 144)/(537) =	2.25	lb/1000 gal
	0.562	lb H2SiF6/1000 gal mixture
	0.445	**lb F/1000 gal mixture**

fill rate and vapor displacement rate		
RAILCAR		
14000	gallons/railcar	
500	gallons/min - load rate	
0.133681	ft3/gallon	
1871.528	ft3/railcar	
66.8403	ft3/min, vapor displacement rate	

fill rate and vapor displacement rate		
TANK TRUCK		
4510	gallons/Tank Truck	
500	gallons/min - load rate	
0.133681	ft3/gallon	
602.8995	ft3/Tank Truck	
66.8403	ft3/min, vapor displacement rate	

1000gal/yr		
1000gal/day	lb F/day	
70	31.1	

Emissions per rail car

2.25 lb/1000 gal *14,000 gallons/rail car * 0.25 gal H_2SiF_6/gal loaded =	7.87 lb H_2SiF_6/rail car
0.562 lb H2SiF6/1000 gal mixture loaded *14,000 gallons/rail car =	7.87 lb H_2SiF_6/rail car
with a F content of 114/144 [6 * F / 1 * H2SiF6], the fluoride emissions are =	6.23 lb F/rail car

Railcar Filling Emissions (lb/hr)

# Railcars	1	2	3	4	5
lb/hr as F	0.260	0.519	0.779	1.038	1.298
g/sec as F	0.033	0.065	0.098	0.131	0.164

Evaluation for Fluoride SER threshold

6000	lb/yr, SER for F		
5976	lb F / yr (less amount F from CV Scrubber)		
13,432,637	gallons mixture/yr	1,119,386	gallons/month
13,433	1000gal mixture/yr	1,119	1000gallons/month
959.5	railcars /yr	2.63	rail car/day (ann avg)
2978.4	tank trucks / yr	8.16	tain truck/day (ann avg)

1	
3	4
6	10
9	19
12	31
15	46
46	

445
5,339
2.7

Emissions per tanker truck

2.25 lb/1000 gal * 4,510 gallons/tank truck * 0.25 gal H_2SiF_6/gal loaded =	2.53 lb H_2SiF_6/tank truck
0.562 lb H2SiF6/1000 gal mixture loaded * 4,510 gallons/tank truck =	2.53 lb H_2SiF_6/tank truck
with a F content of 114/144 [6 * F / 1 * H2SiF6], the fluoride emissions are =	2.01 lb F/tank truck

Tanker Truck Filling Emissions (lb/hr)

# Trucks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
lb/hr as F	0.084	0.167	0.251	0.334	0.418	0.502	0.585	0.669	0.752	0.836	0.920	1.003	1.087	1.170	1.254
g/sec as F	0.011	0.021	0.032	0.042	0.053	0.063	0.074	0.084	0.095	0.105	0.116	0.126	0.137	0.147	0.158

Emissions (lb/hr) as F

*lb F/vessel * # vessels/day / 24 hr/day*

Simulation Scenarios		Rail lb/hr	Truck lb/hr	Rail gallons	Truck gallons	Total gallons
R6_T0	~~6 railcars & ZERO tank trucks~~	~~0.000~~	~~0~~	~~84000~~	~~0~~	~~84000~~
R5_T0	5 railcars & ZERO tank trucks	1.298	0	70000	0	70000
R4_T0	4 railcars & ZERO tank trucks	1.038	0	56000	0	56000
R5_T1	5 railcars & 1 tank truck	1.298	0.084	70000	4510	74510
R5_T2	5 railcars & 2 tank trucks	1.298	0.167	70000	9020	79020
R4_T2	4 railcars & 2 tank trucks	1.038	0.167	56000	9020	65020
R4_T3	4 railcars & 3 tank trucks	1.038	0.251	56000	13530	69530
R4_T4	4 railcars & 4 tank trucks	1.038	0.334	56000	18040	74040
R4_T5	4 railcars & 5 tank trucks	1.038	0.418	56000	22550	78550
R3_T2	3 railcars & 2 tank trucks	0.779	0.167	42000	9020	51020
R3_T3	3 railcars & 3 tank trucks	0.779	0.251	42000	13530	55530
R3_T4	3 railcars & 4 tank trucks	0.779	0.334	42000	18040	60040
R3_T5	3 railcars & 5 tank trucks	0.779	0.418	42000	22550	64550
R3_T6	3 railcars & 6 tank trucks	0.779	0.502	42000	27060	69060
R3_T7	3 railcars & 7 tank trucks	0.779	0.585	42000	31570	73570
~~R3_T8~~	~~3 railcars & 8 tank trucks~~	~~0.779~~	~~0.669~~	~~42000~~	~~36080~~	~~78080~~
R2_T5	2 railcars & 5 tank trucks	0.519	0.418	28000	22550	50550
R2_T6	2 railcars & 6 tank trucks	0.519	0.502	28000	27060	55060
R2_T7	2 railcars & 7 tank trucks	0.519	0.585	28000	31570	59570
R2_T8	2 railcars & 8 tank trucks	0.519	0.669	28000	36080	64080
R2_T9	2 railcars & 9 tank trucks	0.519	0.752	28000	40590	68590
R2_T10	2 railcars & 10 tank trucks	0.519	0.836	28000	45100	73100
~~R2_T11~~	~~2 railcars & 11 tank trucks~~	~~0.519~~	~~0.920~~	~~28000~~	~~49610~~	~~77610~~
R1_T8	1 railcar & 8 tank trucks	0.260	0.669	14000	36080	50080
R1_T9	1 railcar & 9 tank trucks	0.260	0.752	14000	40590	54590
R1_T10	1 railcar & 10 tank trucks	0.260	0.836	14000	45100	59100
R1_T11	1 railcar & 11 tank trucks	0.260	0.920	14000	49610	63610
R1_T12	1 railcar & 12 tank trucks	0.260	1.003	14000	54120	68120
R1_T13	1 railcar & 13 tank trucks	0.260	1.087	14000	58630	72630
T15	15 tank trucks, ZERO railcars	0	1.254	0	67650	67650
T16	16 tank trucks, ZERO railcars	0	0.000	0	72160	72160
T17	~~17 tank trucks, ZERO railcars~~	~~0~~	~~0.000~~	~~0~~	~~76670~~	~~76670~~

Simulation	Scenarios	Emissions (lb/hr) as F lb F/vessel * # vessels/day / 24 hr/day Rail lb/hr	Truck lb/hr	subtotal lb/hr	CV_Scrub lb/hr	TOTAL lb/hr	C.E. 97.9% CV_Scrub uncontrolled lb/hr	uncontrolled TOTAL lb/hr
R5_T0	5 railcars & ZERO tank trucks	1.298	0	1.298	0.0027	1.300	0.130	1.43
R4_T3	4 railcars & 3 tank trucks	1.038	0.251	1.289	0.0027	1.292	0.130	1.42
R3_T6	3 railcars & 6 tank trucks	0.779	0.502	1.280	0.0027	1.283	0.130	1.41
R2_T9	2 railcars & 9 tank trucks	0.519	0.752	1.272	0.0027	1.274	0.130	1.40
R1_T12	1 railcar & 12 tank trucks	0.260	1.003	1.263	0.0027	1.266	0.130	1.39
T15	15 tank trucks, ZERO railcars	0	1.254	1.254	0.0027	1.257	0.130	1.38

Conditioning Vent Scrubber

4570 cfm	inlet	19.71	mg/scf
4570 cfm	outlet	0.4099	mg/scf
	C.E.	97.9%	

10500 cfm	inlet	8.58	mg/scf
10500 cfm	outlet	0.1784	mg/scf
	C.E.	97.9%	

Itafos Conda LLC
Estimated Emissions from Condition Vent Scrubber Stack

	0.0135	lb F/ton P_2O_5	permit limit					
most recent test	67.1	ton/hr P_2O_5	feed rate during test					
2021 test	80.52	ton/hr P_2O_5	future feed rate limit (feed rate during testing plus 20%)					
	1.087	lb/hr F	calculated total combined (phos & CV scrubber) emissions allowed					
most recent test	0.00605	lb/ton P_2O_5, combined	% of total combined emissions					
2021 test	0.405	lb F / hr phos	99.75%					
	0.001	lb F / hr CV	0.25%	@0.25%	**0.0027 lb/hr CV vent** = 1.087 lb F/hr * 0.0025	0.00034	g/sec CV vent	
	0.406	lb F/hr combined						

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

M E M O R A N D U M

DATE: October 7, 2021

TO: Christina Boulay, Permit Writer, Air Program

FROM: Pao Baylon, Modeling Review Analyst, Air Program

PROJECT: P-2021.0036 PROJ 62668, Initial Permit for the Fluosilicic Acid Recovery Process at a Phosphate Fertilizer Facility in Soda Springs, Idaho

SUBJECT: Demonstration of Compliance with IDAPA 58.01.01.203.02 (NAAQS) and 203.03 (TAPs) as it relates to air quality impact analyses.

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Acronyms, Units, and Chemical Nomenclature

AAC	Acceptable Ambient Concentration of a non-carcinogenic TAP
AACC	Acceptable Ambient Concentration of a Carcinogenic TAP
Appendix W	40 CFR 51, Appendix W – Guideline on Air Quality Models
BRC	Below Regulatory Concern
CFR	Code of Federal Regulations
CMAQ	Community Multi-Scale Air Quality modeling system
CO	Carbon Monoxide
DEQ	Idaho Department of Environmental Quality
EL	Emissions Screening Level of a TAP
EPA	United States Environmental Protection Agency
ERM	Environmental Resources Management (permittee's permitting and modeling consultant)
F	Fluoride
FSA	Fluosilicic Acid
HAP	Hazardous Air Pollutant
Idaho Air Rules	Rules for the Control of Air Pollution in Idaho, located in the Idaho Administrative Procedures Act 58.01.01
lb	Pounds
lb/hr	Pounds per hour
Itafos	Itafos Conda LLC (permittee)
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
O_3	Ozone
Pb	Lead
PM_{10}	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 2.5 micrometers
ppb	parts per billion
PTC	Permit to Construct
PTE	Potential to Emit
SIL	Significant Impact Level
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
VOC	Volatile Organic Compounds
$\mu g/m^3$	Micrograms per cubic meter of air

1.0 Summary

Itafos Conda LLC (Itafos) submitted a Permit to Construct (PTC) application for a modification to its phosphate fertilizer facility located at 3010 Conda Road in Soda Springs, Idaho. The project involves only the proposed fluosilicic acid (FSA) recovery process. To recover FSA, Itafos will install a new separation vessel, recirculation tank, and pump. While the installed equipment will mostly be a closed system, the FSA recovery process will result in emissions of fluorides (F) from vapors collected from the FSA recirculation tank, 52% Hotwell, and the FSA storage tanks, which are directed to the existing Conditioning Vent Scrubber. FSA vapor emissions, expressed as fluoride emissions, would also occur during the transfer of FSA into railcars and/or tanker trucks for shipping. Project-specific air quality analyses involving atmospheric dispersion modeling of estimated emissions associated with the facility were submitted to DEQ to demonstrate that emissions associated with the facility operations would not cause or significantly contribute to a violation of any applicable ambient air quality standard as required by the Idaho Administrative Procedures Act 58.01.01.203.02 and 203.03 (Idaho Air Rules Section 203.02 and 203.03). This memorandum provides a summary of DEQ's review of the ambient air impact analyses submitted with the permit application.

Environmental Resources Management (ERM), on behalf of Itafos, prepared the PTC application and performed ambient air impact analyses for this project to demonstrate compliance with applicable National Ambient Air Quality Standards (NAAQS) and Toxic Air Pollutant (TAP) increments. The DEQ review of submitted data and analyses summarized by this memorandum addressed only the rules, policies, methods, and data pertaining to the air impact analyses used to demonstrate that estimated emissions associated with operation of the facility will not cause or significantly contribute to a violation of any applicable air quality standard. This review did not address/evaluate compliance with other rules or analyses not pertaining to the air impact analyses. Evaluation of emission estimates was the responsibility of the DEQ permit writer and is addressed in the main body of the DEQ Statement of Basis, and emission calculation methods were not evaluated in this modeling review memorandum.

The submitted information and analyses: 1) showed either a) that estimated potential/allowable emissions of criteria pollutants are at a level defined as below regulatory concern (BRC) and do not require a NAAQS compliance demonstration, or b) that criteria pollutant emission increases resulting from the proposed project are below site-specific modeling applicability thresholds, developed to assure that emissions below such levels will not result in ambient air impacts exceeding Significant Impact Levels (SILs); 2) showed that TAP emission increases associated with the project will not result in increased ambient air impacts exceeding allowable TAP increments.

Table 1 presents key assumptions and results to be considered in the development of the permit.

Idaho Air Rules require air impact analyses be conducted in accordance with methods outlined in 40 CFR 51, Appendix W *Guideline on Air Quality Models* (Appendix W). Appendix W requires that air quality impacts be assessed using atmospheric dispersion models with emissions and operations representative of design capacity or as limited by a federally enforceable permit condition. The submitted information and analyses demonstrated to the satisfaction of the Department that operation of the proposed project will not cause or significantly contribute to a violation of any ambient air quality standard, provided the key conditions in Table 1 are representative of facility design capacity or operations as limited by a federally enforceable permit condition. The DEQ permit writer should use Table 1 and other information presented in this memorandum to generate appropriate permit provisions/restrictions to assure the requirements of Appendix W are met regarding emissions representative of design capacity or permit allowable rates.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES.	
Criteria/Assumption/Result	**Explanation/Consideration**
General Emission Rates. Emission rates used in the air impact analyses, as listed in this memorandum, must represent maximum potential emissions as given by design capacity, inherently limited by the nature of the process or configuration of the facility, or as limited by the issued permit for the specific pollutant and averaging period.	Compliance has not been demonstrated for emission rates greater than those used in the air impact analyses.
Daily Limit for FSA Loading. FSA loading into railcars and tank trucks shall not exceed 70,000 gallons per day. A total of 46 unique combinations of railcar and tank truck loading could occur in any given day; however, only six scenarios were modeled (each representing an FSA loading of up to 70,000 gallons per day): - Five railcars and zero tank trucks - Four railcars and three tank trucks - Three railcars and six tank trucks - Two railcars and nine tank trucks - One railcar and 12 tank trucks - Zero railcars and 15 tank trucks Each modeled scenario represents the maximum number of tank trucks that can be filled for each case of railcar number to be filled.	Compliance has not been demonstrated for FSA loading into railcars and tank trucks exceeding 70,000 gallons per day. Compliance has been demonstrated only for the following 46 scenarios: - Five railcars and zero tank trucks - Four rail cars and up to three tank trucks - Three rail cars and up to six tank trucks - Two rail cars and up to nine tank trucks - One rail car and up to 12 tank trucks - Zero rail cars and up to 15 tank trucks
Release Parameters for TAP Emission Sources. TAP emission sources, as constructed and operated, must be accurately represented by the analyses submitted with the PTC application. Stack heights are no shorter than what is indicated in this memorandum. Stack diameters are no larger than what is indicated in this memorandum. Typical exhaust flow rates and temperatures at the point of release are not less than the values indicated in this memorandum.	Compliance with applicable air quality standards is not assured if release parameters vary substantially from what was used in impact analyses.

Summary of Submittals and Actions

July 15, 2021 Application received by DEQ.

July 21, 2021 Regulatory start date.

August 20, 2021 Application determined complete by DEQ.

2.0 Background Information

This section provides background information applicable to the project and the site. It also provides a brief description of the applicable air impact analyses requirements for the project.

2.1 Project Description

The Itafos facility produces multiple phosphate fertilizer products and alters its product mix to meet the changing requirements of its customers. The submitted PTC application was for the proposed FSA recovery process only.

FSA (fluosilicic acid, hydrofluosilicic acid, or H_2SiF_6) is a common by-product of phosphate fertilizer production, which typically resides in phosphogypsum pond systems, is responsible for fluoride emissions from the plant, and contributes to the low pH characteristics of pond water. FSA will be recovered as a 25% solids-free solution and sold primarily to the municipal water fluoridation market in the U.S. The FSA recovery process will be placed within the existing purified phosphoric acid evaporator

process – between the entrainment separator and the barometric condenser. Existing tank vapors are collected and sent to the Conditioning Vent Scrubber (previously known as the Secondary Phosphoric Acid Plant stack).

To recover FSA, Itafos will install a new separation vessel, recirculation tank, and pump. While the installed equipment is a mostly closed system, the FSA Recovery Process will result in emissions of fluorides from vapors collected from the FSA recirculation tank, 52% Hotwell, and the FSA storage tanks, which are directed to the existing Conditioning Vent Scrubber. FSA vapor emissions, expressed as fluoride emissions, would also occur during the transfer of FSA into railcars and/or tanker trucks for shipping.

The PTC addresses all air pollutant-emitting activities associated with the project.

2.2 Facility Location and Area Classification

The Itafos facility is located at 3010 Conda Road in Soda Springs, Idaho (Northing: 4,732,014 meters [m]; Easting: 455,378 m; UTM Zone 12), which is designated as an attainment or unclassifiable area for particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers ($PM_{2.5}$), carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb). The area is not classified as non-attainment for any criteria pollutant.

2.3 Air Impact Analyses Required for All Permits to Construct

Idaho Air Rules Sections 203.02 and 203.03:

> *No permit to construct shall be granted for a new or modified stationary source unless the applicant shows to the satisfaction of the Department all of the following:*
>
> ***02. NAAQS**. The stationary source or modification would not cause or significantly contribute to a violation of any ambient air quality standard.*
>
> ***03. Toxic Air Pollutants.** Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586.*

Atmospheric dispersion modeling, using computerized simulations, is used to demonstrate compliance with both NAAQS and TAPs. Idaho Air Rules Section 202.02 states:

> ***02. Estimates of Ambient Concentrations**. All estimates of ambient concentrations shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51 Appendix W (Guideline on Air Quality Models).*

2.4 Significant Impact Level and Cumulative NAAQS Impact Analyses

The Significant Impact Level (SIL) analysis for a new facility or proposed modification to a facility

involves modeling estimated criteria air pollutant emissions from the facility or modification to determine the potential impacts to ambient air. Air impact analyses are required by Idaho Air Rules to be conducted in accordance with methods outlined in 40 CFR 51, Appendix W *Guideline on Air Quality Model* (Appendix W). Appendix W requires that facilities be modeled using emissions and operations representative of design capacity or as limited by a federally enforceable permit condition.

A facility or modification is considered to have a significant impact on air quality if maximum modeled impacts to ambient air exceed the established SIL listed in Idaho Air Rules Section 006 (referred to as a "significant contribution" in Idaho Air Rules) or as incorporated by reference as per Idaho Air Rules Section 107.03.b. Table 2 lists the applicable SILs.

If modeled maximum pollutant impacts to ambient air from the emission sources associated with a new facility or modification exceed the SILs, then a cumulative NAAQS impact analysis is necessary to demonstrate compliance with NAAQS and Idaho Air Rules Section 203.02.

A cumulative NAAQS impact analysis for attainment area pollutants involves assessing ambient impacts (typically the design values consistent with the form of the standard) from facility-wide emissions, and emissions from any nearby co-contributing sources, and then adding a DEQ-approved background concentration value to the modeled result that is appropriate for the criteria pollutant/averaging-period at the facility location and the area of significant impact. The resulting pollutant concentrations in ambient air are then compared to the NAAQS listed in Table 2. Table 2 also lists SILs and specifies the modeled design value that must be used for comparison to the NAAQS. NAAQS compliance is evaluated on a receptor-by-receptor basis for the modeling domain.

If the cumulative NAAQS impact analysis indicates a violation of the standard, the permit may not be issued if the proposed project has a significant contribution (exceeding the SIL) to the modeled violation. If project-specific impacts are below the SIL, then the project does not have a significant contribution to the specific violations.

2.5 Toxic Air Pollutant Analyses

Emissions of toxic substances are generally addressed by Idaho Air Rules Section 161:

> *Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation.*

Permitting requirements for toxic air pollutants (TAPs) from new or modified sources are specifically addressed by Idaho Air Rules Section 203.03 (see Section 2.3 of this modeling memorandum).

Per Section 210, if the total project-wide emission increase of any TAP associated with a new source or modification exceeds screening emission levels (ELs) of Idaho Air Rules Section 585 or 586, then the ambient impact of the emission increase must be estimated. If ambient impacts are less than applicable Acceptable Ambient Concentrations (AACs) for non-carcinogens of Idaho Air Rules Section 585 and Acceptable Ambient Concentrations for Carcinogens (AACCs) of Idaho Air Rules Section 586, then compliance with TAP requirements has been demonstrated.

Idaho Air Rules Section 210.20 states that if TAP emissions from a specific source are regulated by the Department or EPA under 40 CFR 60, 61, or 63, then a TAP impact analysis under Section 210 is not

required for that TAP.

Table 2. APPLICABLE REGULATORY LIMITS.				
Pollutant	**Averaging Period**	**Significant Impact Levels[a] (µg/m³)[b]**	**Regulatory Limit [c] (µg/m³)**	**Modeled Design Value Used[d]**
PM_{10}[e]	24-hour	5.0	150[f]	Maximum 6th highest[g]
$PM_{2.5}$[h]	24-hour	1.2	35[i]	Mean of maximum 8th highest[j]
	Annual	0.2	12[k]	Mean of maximum 1st highest[l]
Carbon monoxide (CO)	1-hour	2,000	40,000[m]	Maximum 2nd highest[n]
	8-hour	500	10,000[m]	Maximum 2nd highest[n]
Sulfur Dioxide (SO_2)	1-hour	3 ppb[o] (7.8 µg/m³)	75 ppb[p] (196 µg/m³)	Mean of maximum 4th highest[q]
	3-hour	25	1,300[m]	Maximum 2nd highest[n]
	24-hour	5	365[m]	Maximum 2nd highest[n]
	Annual	1.0	80[r]	Maximum 1st highest[n]
Nitrogen Dioxide (NO_2)	1-hour	4 ppb (7.5 µg/m³)	100 ppb[s] (188 µg/m³)	Mean of maximum 8th highest[t]
	Annual	1.0	100[r]	Maximum 1st highest[n]
Lead (Pb)	3-month[u]	NA	0.15[r]	Maximum 1st highest[n]
	Quarterly	NA	1.5[r]	Maximum 1st highest[n]
Ozone (O_3)	8-hour	40 TPY VOC[v]	70 ppb[w]	Not typically modeled

a. Idaho Air Rules Section 006 (definition for significant contribution) or as incorporated by reference as per Idaho Air Rules Section 107.03.b.
b. Micrograms per cubic meter.
c. Incorporated into Idaho Air Rules by reference, as per Idaho Air Rules Section 107.
d. The maximum 1st highest modeled value is always used for the significant impact analysis unless indicated otherwise. Modeled design values are calculated for each ambient air receptor.
e. Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
f. Not to be exceeded more than once per year on average over 3 years.
g. Concentration at any modeled receptor when using five years of meteorological data.
h. Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
i. 3-year mean of the upper 98th percentile of the annual distribution of 24-hour concentrations.
j. 5-year mean of the 8th highest modeled 24-hour concentrations at the modeled receptor for each year of meteorological data modeled. For the SIL analysis, the 5-year mean of the 1st highest modeled 24-hour impacts at the modeled receptor for each year.
k. 3-year mean of annual concentration.
l. 5-year mean of annual averages at the modeled receptor.
m. Not to be exceeded more than once per year.
n. Concentration at any modeled receptor.
o. Interim SIL established by EPA policy memorandum.
p. 3-year mean of the upper 99th percentile of the annual distribution of maximum daily 1-hour concentrations.
q. 5-year mean of the 4th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of 1st highest modeled 1-hour impacts for each year is used.
r. Not to be exceeded in any calendar year.
s. 3-year mean of the upper 98th percentile of the annual distribution of maximum daily 1-hour concentrations.
t. 5-year mean of the 8th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of maximum modeled 1-hour impacts for each year is used.
u. 3-month rolling average.
v. An annual emissions rate of 40 ton/year of VOCs is considered significant for O_3.
w. Annual 4th highest daily maximum 8-hour concentration averaged over three years.

3.0 Analytical Methods and Data

The submitted modeling report provides a detailed discussion of the methods and data used to demonstrate compliance with applicable standards.

Emission increases of criteria pollutants and TAPs resulting from the facility were estimated by ERM for

various applicable averaging periods. Emission rates used in the dispersion modeling analyses, as listed in this memorandum, should be reviewed by the DEQ permit writer and compared with those in the final emission inventory. All modeled criteria air pollutant and TAP emission rates must be equal to or greater than the potential emission increase calculated in the PTC emission inventory or proposed permit allowable emission rates.

3.1 Criteria Pollutant Modeling Applicability and Modeled Emission Rates

If a project would qualify for a Below Regulatory Concern (BRC) permit exemption as per Idaho Air Rules Section 221 if it were not for potential emissions of one or more pollutants exceeding the BRC threshold of 10 percent of emissions defined by Idaho Air Rules as "significant," then a NAAQS compliance demonstration may not be required for those pollutants with emissions below BRC levels. DEQ's regulatory interpretation policy of exemption provisions of Idaho Air Rules Section 221.01 is that: "*A DEQ NAAQS compliance assertion will not be made by the DEQ modeling group for specific criteria pollutants having a project emissions increase below BRC levels, provided the proposed project would have qualified for a Category I Exemption for BRC emissions quantities except for the emissions of another criteria pollutant.*[1]" The interpretation policy also states that the exemption criteria of uncontrolled potential to emit (PTE) not to exceed 100 ton/year (Idaho Air Rules Section 220.01.a.i) is not applicable when evaluating whether a NAAQS impact analysis is required. A permit will be issued limiting PTE below 100 ton/year, thereby negating the need to maintain calculated uncontrolled PTE under 100 ton/year.

The BRC exemption cannot generally be used to exempt a project from a pollutant-specific NAAQS compliance demonstration where a PTC is required for the action regardless of emission quantities, such as the modification of an existing emission or throughput limit. However, in this instance, if post-project facility-wide emissions of the criteria pollutant are also below BRC thresholds, then a NAAQS compliance demonstration is not required.

A NAAQS compliance demonstration must be performed for pollutant increases that would not qualify for the BRC exemption from the requirement to demonstrate compliance with NAAQS. DEQ established emission *de minimis* levels as a function of the Significant Emission Rates (SERs) defined in Idaho Air Rules Section 005.108. The SERs are expressed as annual emission rates. To use SERs for NAAQS with short-term averaging periods, the SER is divided by 8,760 hours/year and compared to maximum hourly emissions for 1-hour standards or maximum daily emissions divided by 24 for 24-hour standards. DEQ also developed SIL thresholds for modification projects; emissions less than these rates are reasonably assured to have impacts less than the applicable SIL.

A modeling applicability threshold assuring project impacts less than the SIL is used for modification projects to facilities where facility-wide NAAQS compliance demonstrations have not been recently performed. This threshold assures with high confidence that the project will not significantly contribute to any potentially existing NAAQS violation. These threshold values were based on modeling of a generic DEQ-generated facility, using the AERMOD regulatory model with Idaho meteorological data. The SIL thresholds are emission rates that, when modeled using the generic DEQ-generated facility, result in impacts just below the applicable SIL. Therefore, if emissions of a pollutant from affected units/processes are below SIL modeling thresholds, then air impact modeling is not necessary to confidently demonstrate that the proposed project will not cause or contribute to a NAAQS violation. If emissions from affected units/processes exceed SIL modeling thresholds, then air impact modeling is required for permitting.

If facility-wide NAAQS compliance modeling was performed within the previous five years, was

representative of the existing facility and operations, and included the pollutant of interest, then an applicant may use 1/8th of the SER or 1/8th SER / 8,760 for short-term averages instead of the SIL thresholds.

No criteria pollutants are emitted as part of the project; therefore, NAAQS modeling was not required for this project.

3.2 TAPs Modeling Applicability and Modeled Emission Rates

TAP emission regulations under Idaho Air Rules Section 210 are only applicable to new or modified sources constructed after July 1, 1995.

Table 3 provides a summary of TAP emission increases for the project for the only TAP that had an increase exceeding the ELs of Idaho Air Rules Section 585 or 586.

Table 3. TAP EMISSION INCREASES THAT TRIGGER MODELING.

Toxic Air Pollutant	Emissions (lb/hr)[a]	Screening Emission Level (lb/hr)
Fluorides (as F)[b]	1.30	0.167

a. Pounds per hour.
b. Non-carcinogenic TAP. ELs are daily maximum emissions expressed as pounds/hour. The emission rate is the daily emissions divided by 24 hours/day.

FSA emissions (as F) are primarily exhausted to the atmosphere from the rail car and/or tank truck filling hatch. A small amount of fluoride emissions are also exhausted to the atmosphere from the Conditioning Vent Scrubber. Up to 70,000 gallons of FSA per day will be loaded into railcars and/or tanker trucks. Railcar filling can occur at one of two filling stations located adjacent to each other; tanker truck filling will occur at a separate loadout station adjacent to (south of) the railcar loadout station. Figure 1 in Section 3.3 of this memorandum illustrates the locations of these modeled emission sources. Only one railcar or tanker truck will be filled at any one time. Therefore, to keep the total FSA loading at or less than 70,000 gallons per day, a total of 46 unique combinations could occur in any given day, from as many as five railcars (and zero tanker trucks) to as many as 15 tanker trucks (and zero railcars):

- Filling five railcars can be combined with zero tank trucks before exceeding 70,000 gallons/day;
- Filling four railcars can be combined with up to 3 tank trucks before exceeding 70,000 gallons/day;
- Filling three railcars can be combined with up to 6 tank trucks before exceeding 70,000 gallons/day;
- Filling two railcars can be combined with up to 9 tank trucks before exceeding 70,000 gallons/day;
- Filling one railcar can be combined with up to 12 tank trucks before exceeding 70,000 gallons/day; and
- With zero railcars filled, up to 15 tank trucks can be loaded before exceeding 70,000 gallons/day.

Note that the emissions per railcar will be 6.23 pounds (lb) of fluoride per day; the emissions per tank truck will be 2.01 lb fluoride per day. Table 4 provides a summary of the most tanker truck loading proposed with each increase in railcars filled, and presents the modeled emission rates for each scenario. A total of six scenarios were modeled. Fluoride emissions from the Conditioning Vent Scrubber are estimated at 0.0027 lb/hr, and are based on the most recent source test (April 2021). All emission sources were modeled as point sources.

Table 4. MODELED EMISSION RATES (IN lb/hr) FOR TOXIC AIR POLLUTANTS.							
Source ID	**Source Description**	**Railcar and Tanker Truck Scenario**					
		R5_T0	**R4_T3**	**R3_T6**	**R2_T9**	**R1_T12**	**R0_T15**
FSARAIL1	FSA Railcar Filling Location #1	1.29800	1.03800	0.77900	0.51900	0.26000	0
FSARAIL2	FSA Railcar Filling Location #2	1.29800	1.03800	0.77900	0.51900	0.26000	0
TRUCKFILL	Tanker Truck Loadout	0	0.25100	0.50200	0.75200	1.00300	1.25400
CV_SCRUB	Conditioning Vent Scrubber Stack	0.00270	0.00270	0.00270	0.00270	0.00270	0.00270
Total Modeled Emission Rates		***1.30070***	***1.29170***	***1.28370***	***1.27370***	***1.26570***	***1.25670***

3.3 DEQ Review

DEQ determined the following from review of the Air Modeling Analysis Report submitted with the application:

- The appropriate atmospheric dispersion model was used for the proposed project.
- The latest version of the atmospheric dispersion model was used in the modeling analysis.
- The facility, as described in the protocol and in the submitted modeling report, was adequately represented in the model, regarding geographical location, terrain, structures, emission point locations, and areas of potential exposure. Figure 1 below illustrates the facility's model setup showing locations of buildings and all modeled emission sources. The inset illustrates a three-dimensional view of the model setup as viewed from the southwest.
- Potential downwash effects on emission plumes were accounted for in the model by using building dimensions and locations.
- Appropriate meteorological data were used with the dispersion model. Figure 2 below shows a wind rose and a wind speed histogram for the meteorological dataset that was used in the dispersion analysis.
- Measures described in the application to preclude public access to areas of the site excluded from ambient air were adequate.
- Exhaust parameters were properly used in the dispersion model. The Conditioning Vent Scrubber was initially modeled using an exhaust temperature and an exit velocity that were higher than values from the April 2021 source test report; however, DEQ performed a sensitivity analysis using the correct values and found that maximum modeled impacts were not significantly different from the reported values.
- Receptor grid used in the dispersion model was adequate to resolve maximum modeled impacts. Figure 3 below illustrates the receptor grid used in the analysis, overlaid on a terrain image from Google Earth. The receptor grid was composed of 23,655 receptors.
- Appropriate averaging periods were selected for model output, corresponding to the form of applicable standards.

- All TAPs with project emission increases above the ELs of Idaho Air Rules Section 585 and 586 were modeled to evaluate compliance with applicable AACs and AACCs.

- Through review of the submitted Air Modeling Analysis Report, it appears that the TAPs air impact analyses were performed using recommended data and methods prescribed in the *Idaho Air Quality Modeling Guideline*[2].

DEQ determined that the review of the air impact analyses, as described above, was adequate to provide assurance that the proposed project will not result in increases in ambient air TAP levels that exceeded the specific AACs or AACCs. This conclusion is based on the general type and magnitude of the facility, the types of methods and data used in the analyses, and the modeled results in comparison to applicable AACs/AACCs.

Figure 1. (LEFT) ITAFOS CONDA'S MODEL SETUP SHOWING EMISSION SOURCES AND (RIGHT) THREE-DIMENSIONAL VIEW OF THE MODEL SETUP AS VIEWED FROM THE SOUTHWEST.

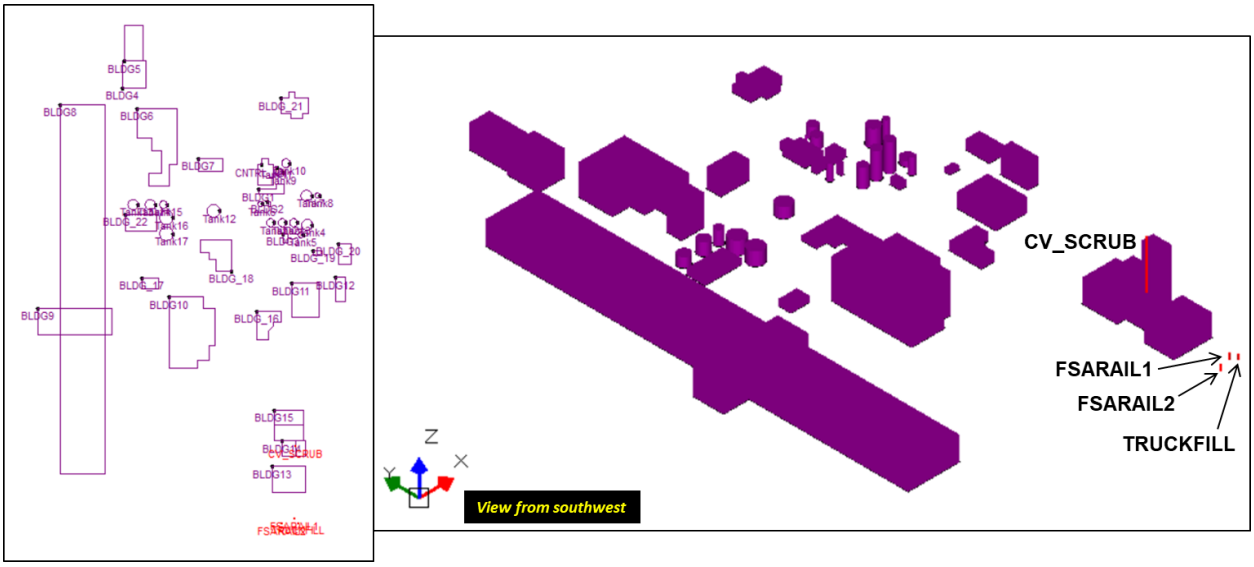


Figure 2. WIND ROSE AND WIND SPEED HISTOGRAM AT SODA SPRINGS IN IDAHO (2004–2008).

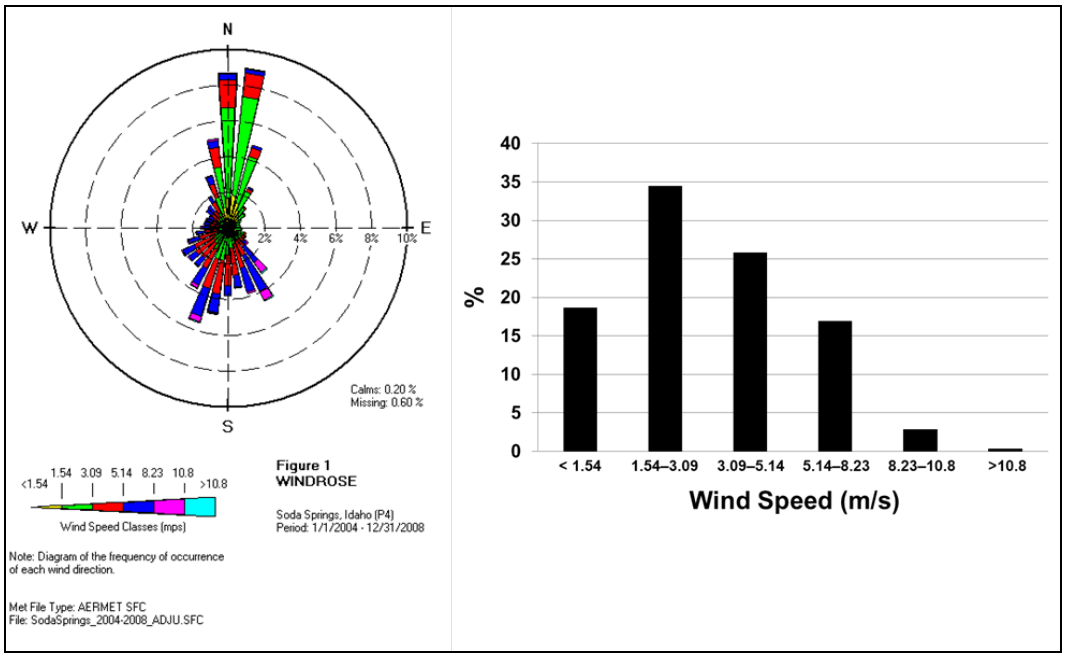
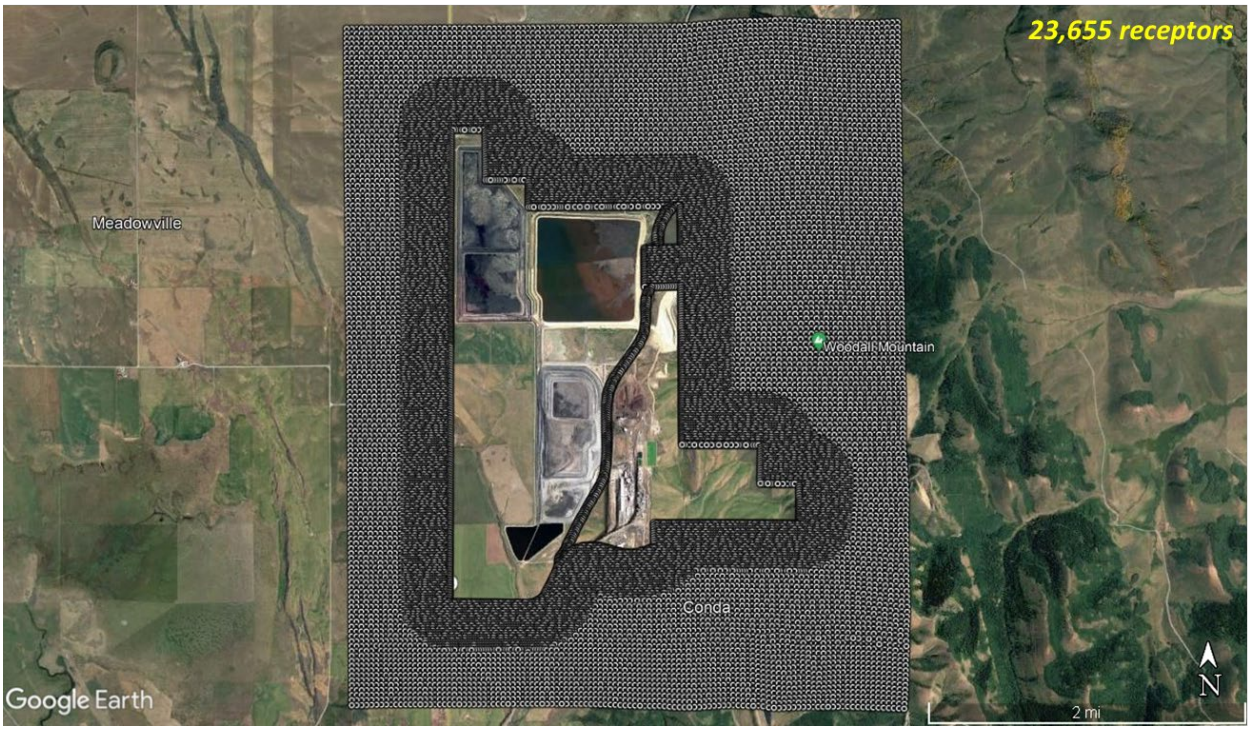


Figure 3. THE FULL RECEPTOR GRID CENTERED AT THE ITAFOS CONDA FACILITY IN SODA SPRINGS, IDAHO.



4.0 NAAQS and TAPs Air Impact Modeling Results

4.1 Results for NAAQS Analyses

A NAAQS compliance demonstration was not required for permit issuance because no criteria pollutants are emitted as a result of the project.

4.2 Results for TAPs Impact Analyses

Table 5 lists the maximum modeled impacts for fluoride for each of the modeled scenarios. Note that railcar filling can occur at one of two filling stations (see Figure 1 above); both locations were evaluated in the modeling analysis. Maximum modeled impacts are below the AAC for all scenarios.

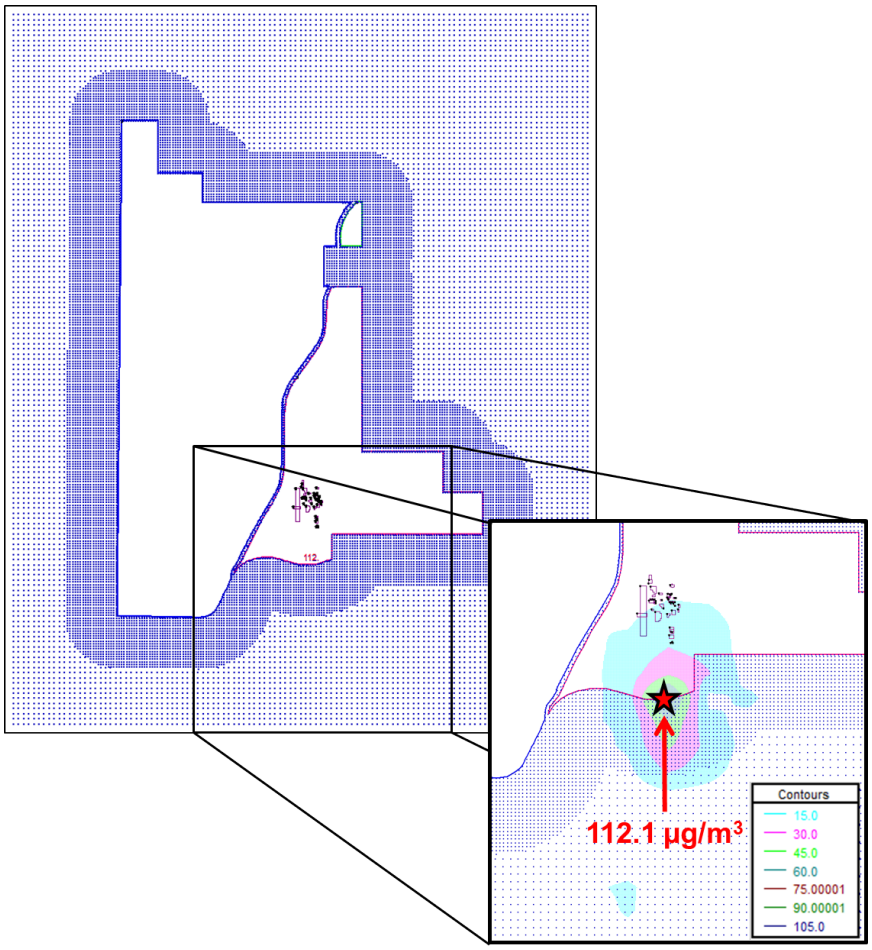
Table 5. TAP AIR IMPACT ANALYSIS RESULTS FOR FLUORIDE.

Scenario	Description	Railcar Location	Maximum Modeled Impact for Fluoride[a] (µg/m^3)[b]	AAC (µg/m^3)	Percent of AAC
R5_T0	5 Railcars, 0 tank trucks	Railcar Location 1	108.1	125	86.5%
		Railcar Location 2	110.4		88.3%
R4_T3	4 Railcars, 3 tank trucks	Railcar Location 1	108.9		87.1%
		Railcar Location 2	104.7		83.8%
R3_T6	3 Railcars, 6 tank trucks	Railcar Location 1	109.8		87.8%
		Railcar Location 2	99.0		79.2%
R2_T9	2 Railcars, 9 tank trucks	Railcar Location 1	110.5		88.4%
		Railcar Location 2	101.5		81.2%
R1_T12	1 Railcar, 12 tank trucks	Railcar Location 1	111.3		89.0%
		Railcar Location 2	106.9		85.5%
R0_T15	0 Railcars, 15 tank trucks	–	112.1		89.7%

a. Non-carcinogenic TAP. Modeled impact and AAC represent a 24-hour averaged concentration.
b. Micrograms per cubic meter.

Figure 4 shows a plot of highest modeled 24-hour fluoride concentrations for the worst-case modeling scenario (R0_T15). The red star denotes the location of maximum impact. High impacts are limited to a relatively small area close to the facility, directly south of the project emission sources. All modeled impacts are below applicable AACs.

Figure 4. HIGHEST MODELED 24-HOUR FLUORIDE CONCENTRATIONS IN µg/m³ FOR SCENARIO R0_T15.



5.0 Conclusions

The information submitted with the PTC application demonstrated to DEQ's satisfaction that applicable emissions resulting from the fluosilicic acid recovery project at the Itafos Conda facility will not cause or significantly contribute to a violation of any ambient air quality standard or TAP increment.

References

1. *Policy on NAAQS Compliance Demonstration Requirements.* Idaho Department of Environmental Quality Policy Memorandum. July 11, 2014.

2. *State of Idaho Guideline for Performing Air Quality Impact Analyses.* Idaho Department of Environmental Quality. September 2013. State of Idaho DEQ Air Doc. ID AQ-011. Available at http://www.deq.idaho.gov/media/1029/modeling-guideline.pdf.

APPENDIX C – FACILITY DRAFT COMMENTS

The following comments were received from the facility on October 20, 2021:

Facility Comment: Simplification of the descriptive detail about the existing Conditioning Vent Wet Scrubber. Our markup comments removes what is felt as unneeded details, and would make this descriptive information consistent with how this equipment (existing) is described in the Facility Tier I permit. Itafos asserts that the detailed included here, except the liquid to gas ratio is not required/warranted. The existing Tier I permit includes this scrubber already (and does not include model # information). This equipment has been update/modified historically and the model # detail no longer is applicable. The liquid to gas ratio – already specified in the Tier I permit – is a minimum value required, and higher values are possible/allowed. Specifying a fixed single value is not accurate.

DEQ Response: The existing condition vent wet scrubber description has been revised to match the description in the existing Tier I permit.

Facility Comment: Simplification of the compliance demonstration for daily FSA product loadout - this really only needs to be tracking of the daily loadout value. The description and narrative about the different scenarios is a valuable aspect of the SOB, but it was done to demonstrate that we identified all possible conditions that would result in loading up to 70,000 gallons per day. There would be no way for these scenarios to be exceeded AND not exceed 70,000 gallons; the primary aspect of compliance with the TAP thresholds is really focused on the daily loadout amount. ITAFOS believes that inclusion of scenario-specific details in the actual PERMIT conditions is redundant and unnecessarily administratively burdensome without any additional environmental benefit. Itafos asserts that the permit condition should be simplified as marked in the draft permit. Development of scenarios for modeling was conducted in order to determine all possible combinations that could lead to loading of 70,000 gallons can demonstrate compliance with applicable TAP requirements.

This demonstration was successful, therefore the explicit specification of the scenario combinations provides descriptive value here in the SOB as evidence that all possible combinations were assessed, but the specification of explicit ‘scenarios in PERMT CONDITIONS is redundant and not required – so long as the daily loading limit of 70,000 gallons is met. Itafos asserts that the permit condition should be simplified as marked in the draft permit. Development of scenarios for modeling was conducted in order to determine all possible combinations that could lead to loading of 70,000 gallons can demonstrate compliance with applicable TAP requirements.

This demonstration was successful, therefore the explicit specification of the scenario combinations provides descriptive value here in the SOB as evidence that all possible combinations were assessed, but the specification of explicit ‘scenarios in PERMT CONDITIONS is redundant and not required – so long as the daily loading limit of 70,000 gallons is met.

DEQ Response: The permit has been revised to remove the scenarios as requested. The permit limit of 70,000 gallons/day, along with daily loadout records shall remain as to demonstrate compliance with the emissions submitted by the applicant and reviewed by DEQ.

APPENDIX D – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:
Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company:	**Itafos Conda LLC**
Address:	**3010 Conda Road**
City:	**Soda Springs**
State:	**Idaho**
Zip Code:	**83241**
Facility Contact:	**Jamie Smith**
Title:	**Environmental Specialist**
AIRS No.:	**325312**

N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Did this permit require engineering analysis? Y/N
N	Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	0	0.0
Total:	0.0	0	**0.0**
Fee Due	**$ 1,000.00**		

Comments: Only Pollutant is a toxic air pollutant hydrofluosilicic acid