LARGO CITY SEWAGE PLANT

APPLICATION FOR TITLE V AIR OPERATION PERMIT RENEWAL

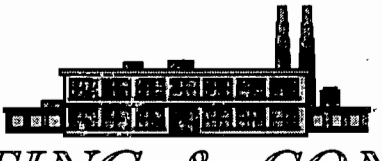
PREPARED FOR:

LARGO CITY SEWAGE PLANT

602 5100 150th AVENUE NORTH
CLEARWATER, FLORIDA
PINELLAS COUNTY

PREPARED BY:

ATC



AIR TESTING & CONSULTING

333 FALKENBURG ROAD, SUITE B-214
TAMPA, FLORIDA 33619

LARGO CITY SEWAGE PLANT

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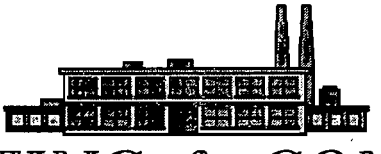

AIR TESTING & CONSULTING
333 FALKENBURG ROAD, SUITE B-214
TAMPA, FLORIDA 33619

MEMORANDUM

TO: Jonathan Holtom

FROM: Jim McDonald JM

DATE: September 15, 2003

SUBJECT: City of Largo's Title V renewal application – CAM Plan Review

Jonathan, attached please find the City of Largo's Title V renewal application, which we received on September 12, 2003. Although the application says CAM is not applicable for the emission units at the facility, I think CAM is applicable and will need your review.

Thanks – Hope to see you at the Annual Air Meeting

Day 60 = Nov. 11

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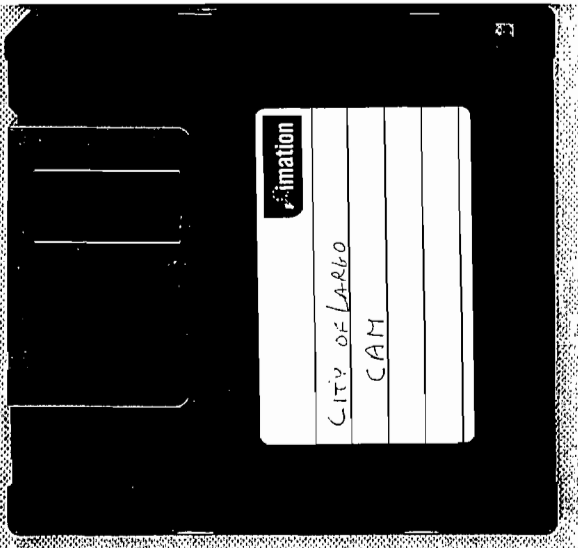

LARGO CITY SEWAGE PLANT

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Supplemental Information

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Supplemental Information

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4D – O & M Plan
4E - Applicable Requirements

APPLICATION INFORMATION

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Largo City Sewage Plant
2. Site Name:
3. Facility Identification Number: 1030060
4. Facility Location...:
   Street Address or Other Locator: 5100 150th Avenue North
   City: Clearwater County: Pinellas Zip Code: 33760
5. Relocatable Facility? ☐ Yes ☒ No
6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: Craven Askew
2. Application Contact Mailing Address...
   Organization/Firm: Largo City Sewage Plant
   Street Address: 5100 150th Avenue North
   City: Clearwater State: Florida Zip Code: 33760
3. Application Contact Telephone Numbers...
   Telephone: (727) 518 - 3201 ext. Fax: (727) 507 - 4476
4. Application Contact Email Address: caskew@largo.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

☐ Air construction permit.

Air Operation Permit

☐ Initial Title V air operation permit.

☐ Title V air operation permit revision.

☒ Title V air operation permit renewal.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

☐ Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

☐ Air construction permit and Title V permit revision, incorporating the proposed project.

☐ Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

☐ I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
001	Two Sewage Sludge Drying Trains		
003	Pelletizer Building with Odor Control System No. 1		
005	Two Sludge Storage Silos		
006	Truck Loading Area		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP. N/A

1. Owner/Authorized Representative Name :

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

4. Owner/Authorized Representative Email Address:

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

   Signature Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
   Joseph V. Carlini, Treatment Plant Manager

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☒ For a municipality, county, state, federal or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: Largo City Sewage Plant
   Street Address: 5000 150th Avenue North
   City: Clearwater State: Florida Zip Code: 33760

4. Application Responsible Official Telephone Numbers...
   Telephone: (727) 518-3080 ext. Fax: (727) 518-3081

5. Application Responsible Official Email Address: jcarlini@largo.com

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

Joseph V Carl — Signature

Sept 9, 2003 — Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kenneth E. Given
   Registration Number: 23203
2. Professional Engineer Mailing Address...
   Organization/Firm: Air Testing & Consulting, Inc.
   Street Address: 333 Falkenburg Road, North Unit B-214
   City: Tampa State: Florida Zip Code: 33619
3. Professional Engineer Telephone Numbers...
   Telephone: (813) 651 - 0878 ext. Fax: (813) 653 - 9082
4. Professional Engineer Email Address: airtest@verizon.net
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☒, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature: Kenneth E Given

Date: 9/3/03

(seal)

* Attach any exception to certification statement.

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 332.50 North (km) 3087.80		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 27/54/22 Longitude (DD/MM/SS) 82/42/7	
3. Governmental Facility Code: 4	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4952
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Craven Askew
2. Facility Contact Mailing Address... Organization/Firm: Largo City Sewage Plant Street Address: 5100 150th Avenue North City: Clearwater State: Florida Zip Code: 33760
3. Facility Contact Telephone Numbers: Telephone: (727) 518 - 3201 ext. Fax: (727) 507 - 4476
4. Facility Contact Email Address: caskew@largo.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: Steven B. Stanton / City Manager
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: City of Largo Street Address: 201 Highland Avenue City: Largo State: Florida Zip Code: 33770
3. Facility Primary Responsible Official Telephone Numbers... Telephone: (727) 586-7454 ext. Fax: (727) 587-6703
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☐ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☐ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☐ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	B	N
VOC	B	N
H114	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

FACILITY SUPPLEMENTAL INFORMATION

C. FACILITY ADDITIONAL INFORMATION

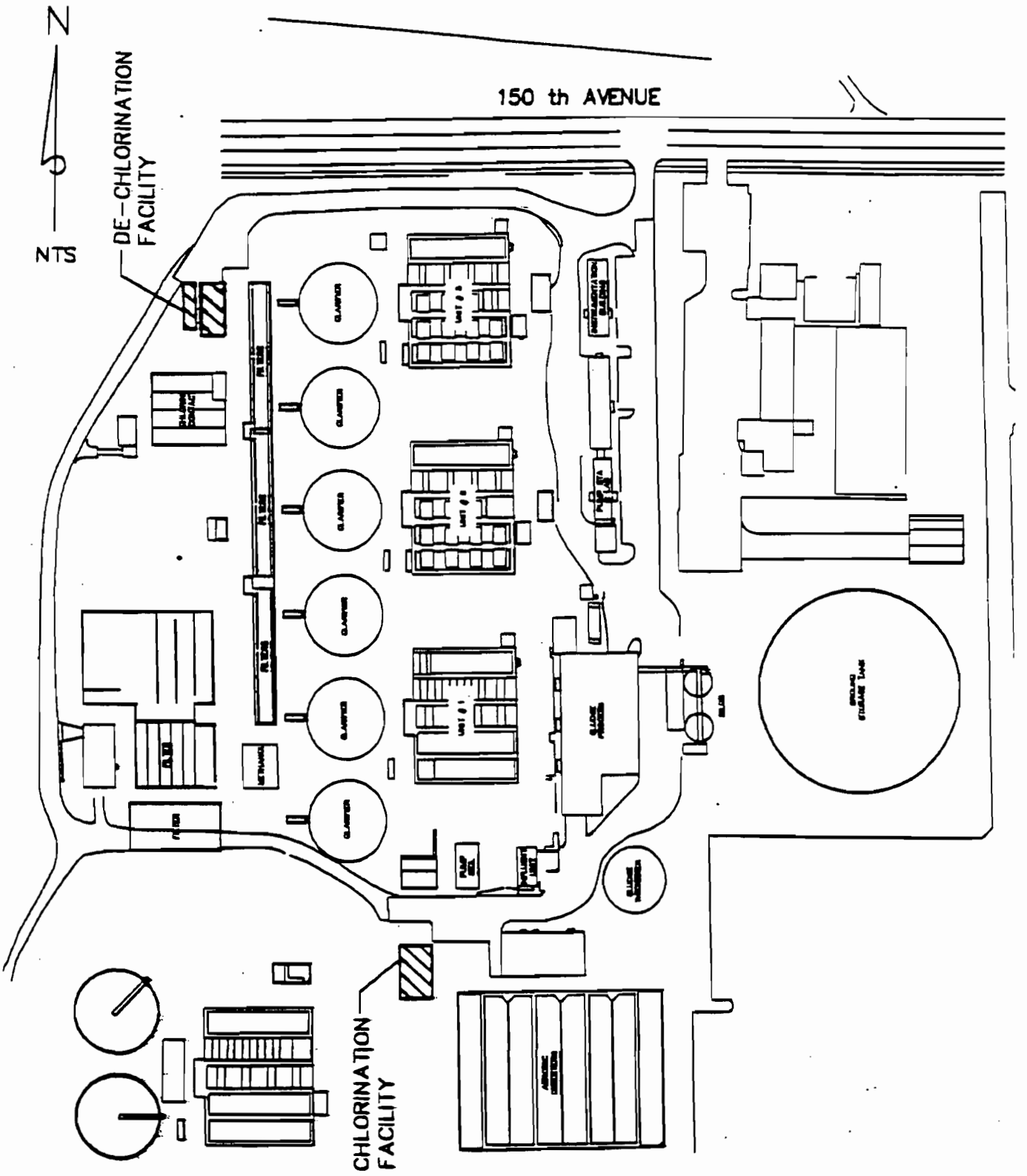
Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: A [ ] Previously Submitted, Date:
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: B [ ] Previously Submitted, Date:
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: C [ ] Previously Submitted, Date:

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   [ ] Attached, Document ID: _____ [ ] Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification:
   [ ] Attached, Document ID:
3. Rule Applicability Analysis:
   [ ] Attached, Document ID:
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   [ ] Attached, Document ID: _____ [ ] Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    [ ] Attached, Document ID: _____ [ ] Not Applicable

A - FACILITY PLOT PLAN



FACILITY PLOT PLAN – CITY OF LARGO SEWAGE PLANT

B - PROCESS FLOW DIAGRAM

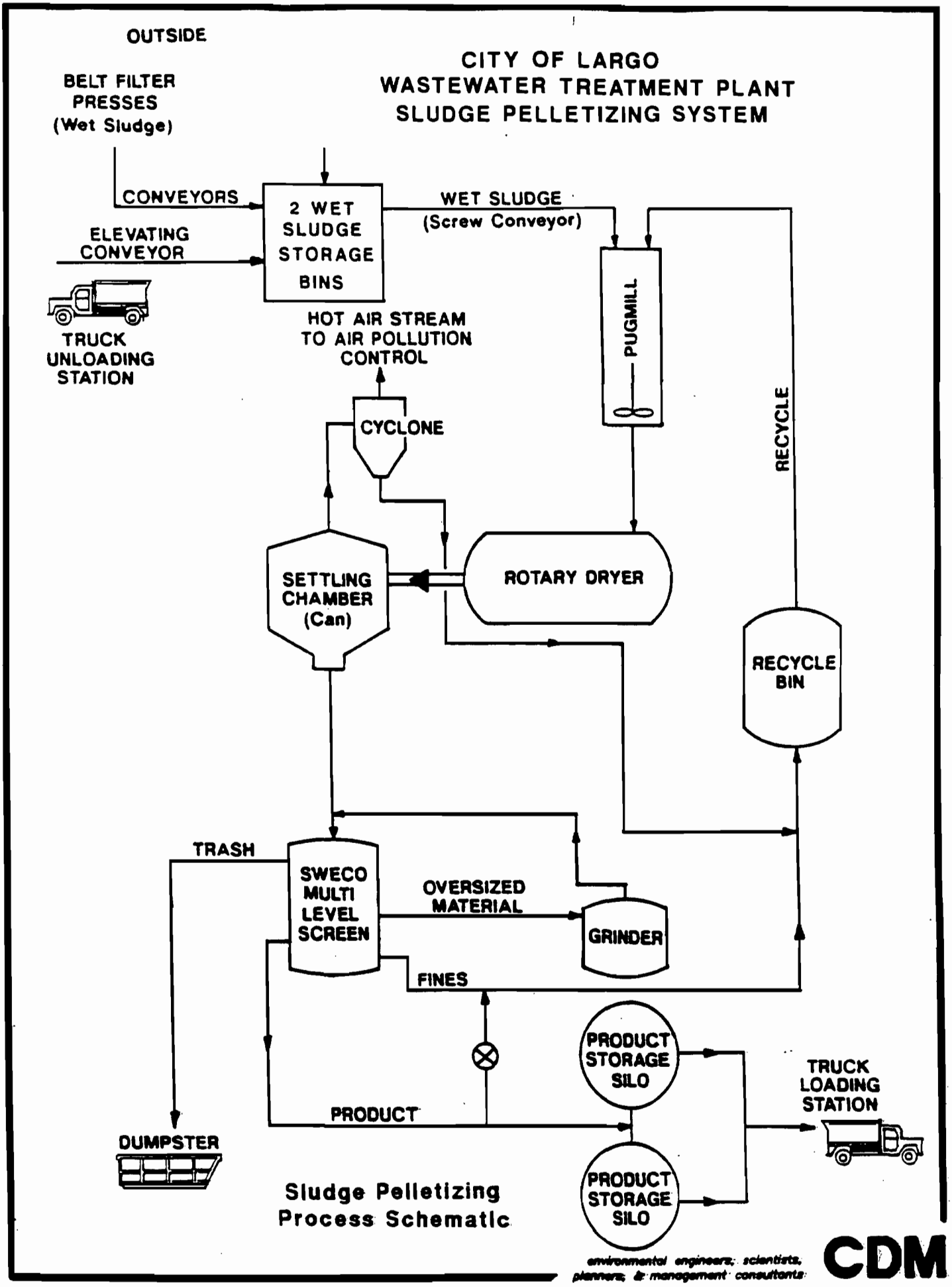

OUTSIDE
CITY OF LARGO
WASTEWATER TREATMENT PLANT
SLUDGE PELLETIZING SYSTEM
BELT FILTER PRESSES (Wet Sludge)
CONVEYORS
ELEVATING CONVEYOR
2 WET SLUDGE STORAGE BINS
WET SLUDGE (Screw Conveyor)
PUGMILL
TRUCK UNLOADING STATION
HOT AIR STREAM TO AIR POLLUTION CONTROL
CYCLONE
RECYCLE
SETTLING CHAMBER (Can)
ROTARY DRYER
RECYCLE BIN
TRASH
SWECO MULTI LEVEL SCREEN
OVERSIZED MATERIAL
GRINDER
FINES
PRODUCT STORAGE SILO
TRUCK LOADING STATION
PRODUCT
DUMPSTER
PRODUCT STORAGE SILO
Sludge Pelletizing Process Schematic
environmental engineers, scientists, planners, & management consultants
CDM

FIGURE 4-1

C - PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Precautions To Prevent Emissions of Unconfined Particulate Matter

The City of Largo has taken and will continue to take reasonable precautions to prevent emissions of unconfined particular matter such as:

- Paving and maintenance of roads, parking areas and yards, when necessary.
- Application of water or non-hazardous chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of water or non-hazardous chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- Removal of particulate matter from roads and other paved areas to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- Confine abrasive blasting where possible.
- Enclosures or covers on conveyor systems.

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID: ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☒ Attached, Document ID:D ☐ Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☒ Attached, Document ID:E
   ☐ Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☒ Attached, Document ID:F
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☒ Attached, Document ID:G ☐ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements Comment

D – INSIGNIFICANT ACTIVITIES

INSIGNIFICANT ACTIVITIES

- Natural gas hot water heaters/boilers
- Brazing, soldering and welding activities
- Sanding equipment
- Fire and safety equipment
- Emergency generators
- Portable gas and diesel powered equipment
- Propane and gas powered forklifts
- Laboratory equipment and testing activities
- Steam cleaning activities
- Space heating
- Industrial wastewater treatment activities
- Kitchen appliances
- Chemical storage and dispensing activities
- Routine maintenance and repair activities
- Janitorial and general housekeeping activities
- Bathroom exhaust
- Adhesive activities
- Plastic wrapping and heat sealing activities
- Box marking and taping activities
- Office equipment

E – APPLICABLE EQUIREMENTS

APPLICABLE REQUIREMENTS

Title V Core List

Federal:
40 CFR 61 Subpart E – National Emissions Standard for Mercury
40 CFR 68 (Section 112 (c) of CAA – Risk Management Plan
40 CFR 60, Appendix A – Stack sampling
40 CFR 61, Appendix B – Stack sampling (Mercury)
40 CFR 61.13 – Emission testing facilities
40 CFR 61.12(e) – Maintenance requirements and credible evidence
40 CFR 61.19 – Circumventation
40 CFR 61 Subpart E – National Emissions Standard for Mercury
40 CFR 61, Appendix B – Stack sampling (Mercury)

ASTM Method D 1391-78 or ASTM E-679-91 – odor testing

State:
Chapter 403, Florida statutes (F.S.) and Florida Administrative Code (F.A.C.)
Rule 62-296.320(4)(b)1. And 4., F.A.C. – Visible Emissions Testing
Rule 62-296.320(1)(a), F.A.C. – VOC/OS emission limits
Rule 62-297 F.A.C. – Testing requirements
Rule 62-210.200, F.A.C. – Definitions – PTE
Rule 62-296.712(2), F.A.C. – PM testing
Rule 62-296.401(1)(a), F.A.C. – VE testing
Rule 62-800(9)(b)3, F.A.C. – Mercury limits

County:
Pinellas County Code
Section 58-178 – O & M Plan

TITLE V CORE LIST

Title V Core List Effective: 03/01/02

[**Note:** The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: ***(description)***

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: ***(description)***

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application.
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review.
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.
62-210.300(3), F.A.C.: Exemptions.
62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.
62-210.300(7), F.A.C.: Transfer of Air Permits.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.
62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
62-210.400, F.A.C.: Emission Estimates.
62-210.650, F.A.C.: Circumvention.
62-210.700, F.A.C.: Excess Emissions.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.
62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.415, F.A.C.: Trading of Emissions Within a Source.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.450, F.A.C.: Permit Review by EPA and Affected States
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
62-213.900(7), F.A.C.: Statement of Compliance Form.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99

62-297.310, F.A.C.: General Test Requirements.
62-297.330, F.A.C.: Applicable Test Procedures.
62-297.340, F.A.C.: Frequency of Compliance Tests.
62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.
62-297.350, F.A.C.: Determination of Process Variables.
62-297.570, F.A.C.: Test Report.
62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests
CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98
CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94
CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99
CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96

F - COMPLIANCE REPORT

COMPLIANCE REPORT & PLAN

The purpose of this report is to state the compliance status of each emission unit:

EU ID	Description	Parameter	Applicable Requirement	Compliance Status	Determination Basis
01	Two Sewage Sludge	VOC	2.05 lbs/hr	1. 0.08 2. 0.09	EPA Method 25A
	Drying Trains	VOC	9.0 tons/yr		
		PM	3.0 lbs/hr	1. 0.156 2. 0.164	EPA Method 5
		PM	13.140 tons/yr		
		% Opacity	<5%	<5%	EPA Method 9
		Hg (H114)	3200gm /24 hrs	29.38gm/24 hrs	EPA Method 105 or 101A
		Odor		420 DTU	
03	Pelletizer Building w/odor control system No.1	Odor	None	N/A	N/A
05	Two sludge storage silos	% Opacity	<5%	<5%	EPA Method 9
06	Truck loading area	% Opacity	<5%	<5%	EPA Method 9

All units are currently in compliance with the current applicable requirements.

G - VERIFICATION OF RISK MANAGEMENT PLAN SUBMISSION

INBOX Message

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From: "RMP Executive Summary [165.121.45.120]" <repository@RTK.NET> Add to Address Book
Date: Wed, 23 Apr 2003 09:26:01 -0400
To: pihs@ix.netcom.com
Subject: CITY OF LARGO WATER RECLAMATION FACILITY CLEARWATER, FL 33760

Facility Name: City of Largo Water Reclamation Facility
Clearwater, FL 33760
Parent Company: City of Largo
RMP Facility ID: 100000050008
Submission Receipt Date: 06/18/1999
(This set of RMP executive summaries was last updated on 6/25/2001).

RMP Executive Summary below:

The City of Largo Water Reclamation Facility utilizes chlorine gas and sulfur dioxide gas for chlorination (disinfection) and dechlorination, respectively, of the Facility's effluent from the treatment of wastewater. Current staff recalls no large scale accidental release of either of these substances. As part of this Risk Management Program, the Facility has re-reviewed and formally established a complete program which includes the assessmen of hazards, a thorough prevention program and an emergency response program.

The Facility is a municipal wastewater treatment facility. As stated above, chlorine is used to disinfect the Facility's effluent. Sulfur dioxide is then used to partially dechlorinate the effluent prior to distribution to the reclaimed water system for irrigation purposes. The Florida Department of Environmental Protection requires that these two processes be done. Twenty one ton cylinders of chlorine and fourteen one ton cylinders of sulfur dioxide is the maximum quantity that is maintained on-site. Both substances are gaseous that are liquified under pressure. The cylinders are delivered to the Facility and unloaded by the chemical vendor. The cylinders are connected/disconnected by the Facility's trained operating personnel.

The worst case release scenarios for both substances involve the release of all the contents in one cylinder. Using the common EPA mandated factors, the distances to the toxic endpoints are both 1.3 miles. Alternate release scenarios were evaluated for each substance. The chlorine alternate scenarios were assumed to occur in the chlorine storage building which is equipped with air scrubbers. Since the scrubbers are able to mitigate all of the discussed releases, no off-site consequences are predicted. The alternate release scenario for sulfur dioxide involves the rupture of the one inch diameter pipe manifold connected to four one ton cylinders upstream of the vacuum regulator. Using the EPA standard factors, the distance to the toxic endpoint is ____ miles. Other release scenarios involving lesser releases quantities and shorter distances to endpoint were also evaluated. The worst case scenarios were agreed to be 'highly unlikely' while the alternate scenarios are mor!
!
e likely and were discussed more concerning emergency response. Also the EPA mandated and standard meterologic condition factors used in the analyses are not 'average' conditions at the Facility. Due to the Facility's proximity to the coast, the average conditions are most likely less calm. Less calm conditions would disperse the substances at a much quicker rate thus resulting in a shorter distance to the toxic endpoint.

The Facility has had no accidental releases of either chlorine or sulfur dioxide in the past five years that resulted in injuries or other impacts as defined by EPA.

The Facility has a prevention program in place which covers all aspects of

the Facility's operations on and around the chlorination and dechlorination processes. Written procedures are followed by trained staff on all activities. The entire systems are inspected at least one time each shift during the 24 hour per day, 365 days per year operation and manning of the Facility. Any concerns are addressed promptly by the operations staff and maintenance staff which is on 24 hour per day stand-by. The City is dedicated to safety with the adoption of a city-wide safety program and the Commission's planned approval and adoption of this Risk Management Program.

Immediate and limited emergency response would be completed by the Facility's staff upon a release. During cylinder delivery, switchover and changeout, a release is most likely to occur. The operators performing these duties don personal protective gear and connect to a containerized air supply. If a leak occurs, they are able to stop or mitigate the release while connected. Mitigation could include closing of valves, reorientating the cylinder to prevent release of liquid, closing of doors, etc. If the release continues, 9-1-1 is called and the facility is evacuated. The local haz-mat response team would then respond and notify other effected parties including law enforcement, school board and emergency management. Pinellas County Fire and Rescue, the City of Largo and the other participating agencies maintain a trained and equipped team for hazardous material releases. All municipalities in Pinellas County rely on this team for response to these types of events. The!
!
team would then complete all activities as needed which may include repair of cylinder, evacuation, spill cleanup, environment tests, etc.

The Facility plans to evaluate other disinfection methods to possibly lessen the amount of chlorine which is required to be stored and utilized. Florida Department of Environmental Protection requires that the Facility maintain a certain residual amount of chlorine in the Facility's effluent which is supplied as reclaimed water for irrigation purposes. Therefore the need for chlorine will not be completely removed.

The Facility is also planning upgrades to the dechlorination system. Funds are currently programmed in the City's Capital Improvement Program for new sulfur dioxide storage facilities in future years. Also, if other disinfection methods are selected, the sulfur dioxide inventory (and system) could also be reduced or completely removed.

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EMISSION UNIT INFORMATION

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSION UNIT ID NO. 001 – TWO SEWAGE SLUDGE DRYING TRAINS

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Two sewage sludge drying trains that share a common afterburner and exhaust stack.

3. Emissions Unit Identification Number: 001

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [ ] Yes [X] No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   The gas stream passes through a Fisher-Klosterman, Inc. Model No. MS-520 cyclonic separator, then to a venturi scrubber and than to a Hunngton Energy System, Inc., Model #65 three chamber, regenerative, ceramic bed-type afterburner.

2. Control Device or Method Code(s): 007,022, 053

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 16.34 TPH	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: 12 million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment: The afterburner rated capacity is 2.2 million Btu/hr giving a total of 14.2 million Btu/hr.	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Exhaust Stack	2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 65 feet	7. Exit Diameter: 3.2 feet
8. Exit Temperature: 240 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: 8 %
11. Maximum Dry Standard Flow Rate: 12,000 dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: The two dryers have a common afterburner and stack, but only one unit is allowed to run at a time.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Drying of sewage sludge		
2. Source Classification Code (SCC): 5-01-005-06	3. SCC Units: tons processed	
4. Maximum Hourly Rate: 16.34	5. Maximum Annual Rate: 143,664	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Firing with natural gas		
2. Source Classification Code (SCC): 3-90-006-99	3. SCC Units: MMCF Burned	
4. Maximum Hourly Rate: 0.0135	5. Maximum Annual Rate: 118.47	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1050
10. Segment Comment: Dryer fired at 12 mmbtu/hr Afterburner fired at 2.2 mmbtu/hr		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**053**	**007**	**EL**
VOC	**022**		**EL**
H114	**053**	**007**	**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99.9+
3. Potential Emissions: 0.053 lb/hour 0.233 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.000517 gr/dscf Reference: 7/25/00 STACK TEST	7. Emissions Method Code: 1

8. Calculation of Emissions:

0.000517 gr/dscf x lb/7,000 grs x 12,000 dscfm x 60 min/hr = 0.053 lbs/hr

0.053 lbs/hr x 8,760 hrs/yr x ton/2,000 lbs = 0.2326 tons/yr

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.03 gr/dscf	4. Equivalent Allowable Emissions: 3.0 lb/hour 13.14 tons/year
5. Method of Compliance: EPA Methods (1 – 5)	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.712(2),F.A.C.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 2.05 lb/hour 9.0 tons/year	4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 2.05 lbs/hr Reference: Permit No. AO52-217762	7. Emissions Method Code: 0
8. Calculation of Emissions: 2.05 lbs/hr x 8,760 hrs/yr x ton/2,000 lbs = 8.979 tons/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: ESCTV	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.05 lb/hour	4. Equivalent Allowable Emissions: 2.05 lb/hour 9 tons/year
5. Method of Compliance: EPA Method 18 or 25A	
6. Allowable Emissions Comment (Description of Operating Method): Original construction permit estimated PTE at 180 tons without controls	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: H114 (Hg)	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.294 lb/hour 1.286 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 3200 grs/24 hrs Reference: 40 CFR 61, Subpart E, 61.52(b)	7. Emissions Method Code: 0
8. Calculation of Emissions: 3200 gr/24 hrs x lb/454 grs = 0.294 lb/hr 0.294 lb/hr x 8,760 hrs/yr x ton/2,000 lbs = 1.286 tons/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3200 grams/24 hours	4. Equivalent Allowable Emissions: 0.294 lb/hour 1.286 tons/year
5. Method of Compliance: EPA Method 101A or 105	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 61, Subpart E – 61.52(b)	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Odor	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☐ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions:	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: ASTM Method D 1391-78 or ASTM E-679-91	
6. Allowable Emissions Comment (Description of Operating Method): Required by Permit No. 1030060-002-AV	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE5	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: 20 % Maximum Period of Excess Opacity Allowed: 3 min/hour	
4. Method of Compliance: EPA METHOD 9	
5. Visible Emissions Comment: Rule 62.296.401(1)(a), F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 1A [ ] Previously Submitted, Date

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 1B [ ] Previously Submitted, Date

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 1C [ ] Previously Submitted, Date

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 1D [ ] Previously Submitted, Date
   [ ] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 1E [ ] Previously Submitted, Date
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID:
   Test Date(s)/Pollutant(s) Tested:

   [X] Previously Submitted, Date:
   Test Date(s)/Pollutant(s) Tested: 7/15/03

   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested:
   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: ____ [X] Not Applicable

Additional Requirements for Air Construction Permit Applications

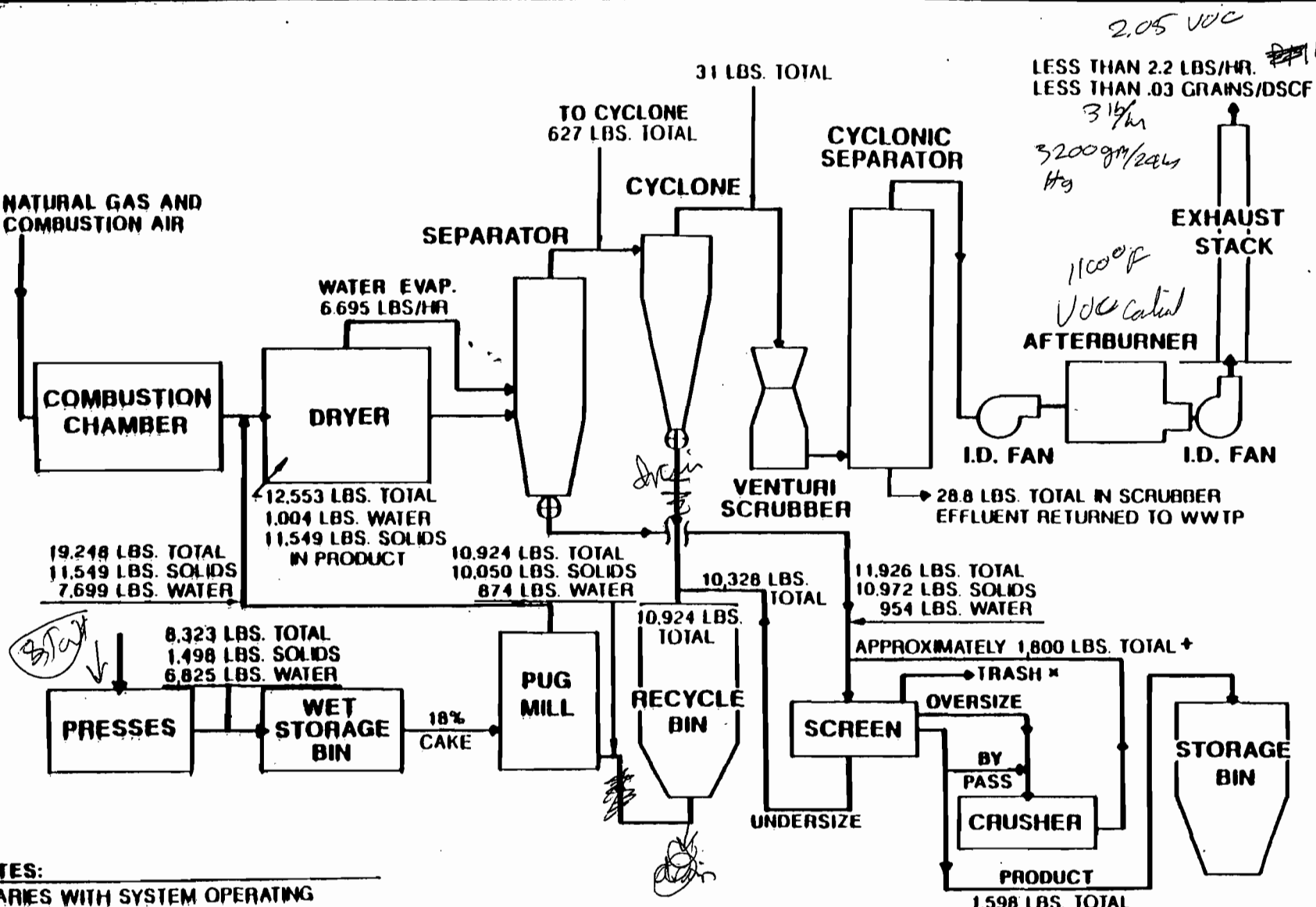
1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 1F
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☒ Not Applicable

Additional Requirements Comment

1A – PROCESS FLOW DIAGRAM



NOTES:

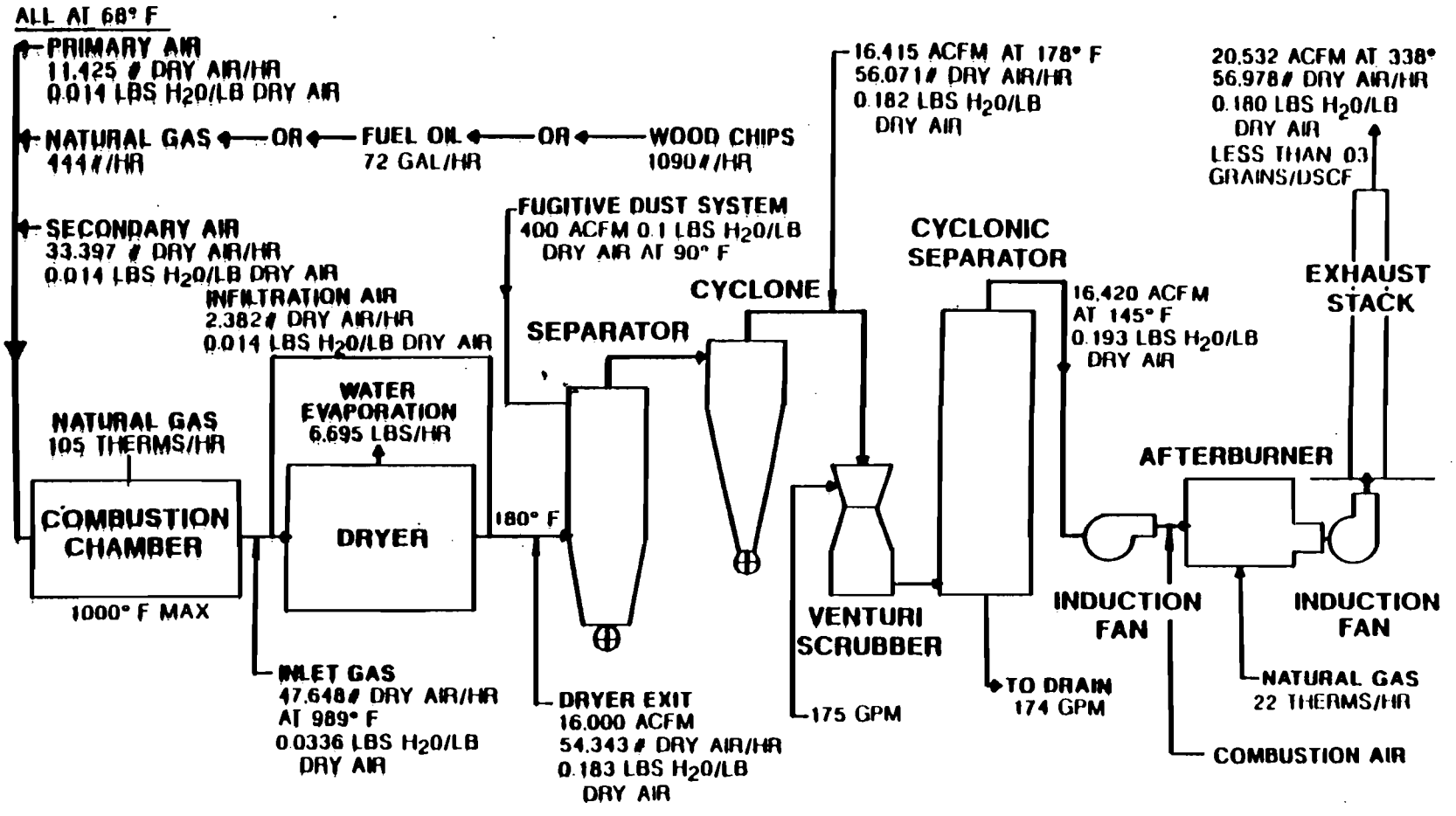
† VARIES WITH SYSTEM OPERATING CONDITIONS

* TRACE QUANTITY TO CLOSED TRASH CONTAINER NOT INCLUDED IN MATERIAL BALANCE. TRASH SCREEN IS A SAFETY DEVICE TO CATCH LOOSE BOLTS, ETC. RATHER THAN A PART OF SLUDGE PELLETIZING SYSTEM

SLUDGE PELLETIZING PROCESS
SYSTEM FLOW - MATERIAL BALANCE
CITY OF LARGO, FLORIDA
SLUDGE HEAT DRYING FACILITY
CDM PROJECT NO. 6157-03

FIGURE 4-4

CDM
environmental engineers, scientists, planners, & management consultants



ALL QUANTITIES ARE BASED ON THE FOLLOWING:

OPERATION: 6 DAYS/WEEK, 312 DAYS/YR, 15.167 HR/DAY

SOLIDS LOADING: 22,723 DRY LB/DAY (1,498 DRY LB/HR)

WET SLUDGE LOADING: 126,239 WET LB/DAY (8,323 WET LB/HR) @ 18% SOLIDS

NOTE: TYPICAL PROCESS TRAIN

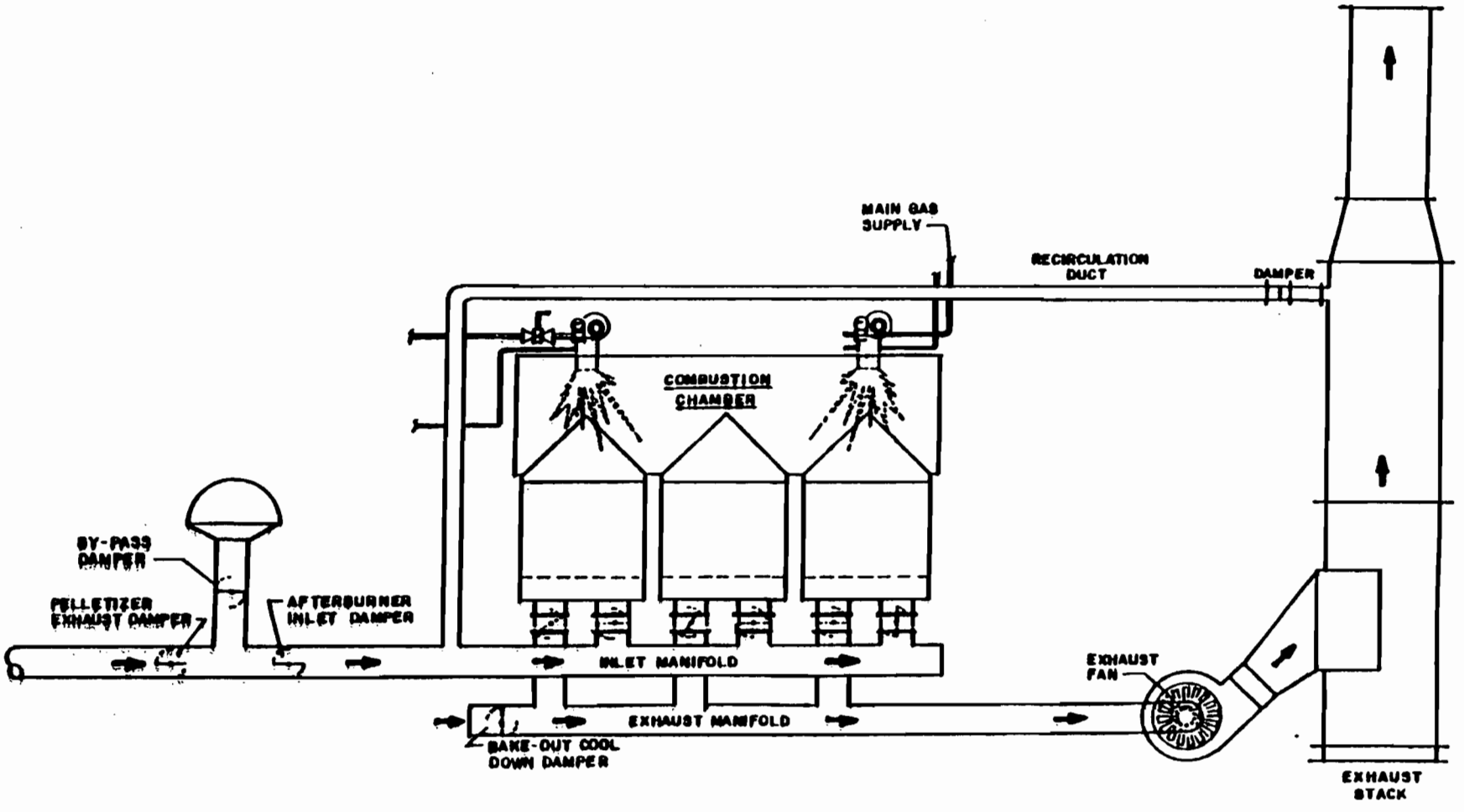
SLUDGE PELLETIZING PROCESS
SYSTEM PROCESS FLOW DIAGRAM
CITY OF LARGO, FLORIDA
SLUDGE HEAT DRYING FACILITY
CDM PROJECT NO. 6157-03

CAMP DRESSER & McKEE INC.

FIGURE 4-5

CDM

environmental engineers, scientists, planners, & management consultants



Operating Mode:

NORMAL OPERATING MODE

FIGURE 4-8

CDM

environmental engineers, scientists, planners, & management consultants

1B – FUEL ANALYSIS

FGT SYSTEM CHROMATOGRAPHS

Spot Analysis of Natural Gas for Delivery in Florida

Date	Time
4/5/00	11:31 AM

	Perry	Perry	Brooker	Gainsville	West Palm	
	36" Stream #1	30" Stream #2	24" Stream	8" Stream	24" Stream	
	Mole%	Mole%	Mole%	Mole%	Mole%	
Components						
Hexane	0.0470	0.0659	0.0553	0.0598	0.0571	
Propane	0.3025	0.3695	0.3348	0.2250	0.3776	
Iso-Butane	0.0763	0.0929	0.0834	0.0526	0.0876	
N-Butane	0.0711	0.0810	0.0734	0.0471	0.0798	
Iso-Pentane	0.0274	0.0354	0.0303	0.0201	0.0302	
N-Pentane	0.0171	0.0224	0.0186	0.0135	0.0194	
Nitrogen	0.2644	0.4139	0.3467	0.2591	0.3618	
Methane	96.9132	95.6349	96.0777	97.0133	95.8773	
C02	0.7133	0.7202	0.7155	0.7654	0.6672	
Ethane	1.5675	2.5638	2.2642	1.5441	2.4420	
Totals	100.0000	100.0000	100.0000	100.0000	100.0000	
Btu	1027.7	1036.5	1033.3	1024.9	1036.0	Dry Btu/cf @ 14.7
Gravity	0.5777	0.5850	0.5822	0.5767	0.5832	Real Relative Den
Total Sulfur	4.4984	2.0907	1.7440			PPM
	0.2811	0.1307	0.1090			Grains/hcf
Current H2O	0.0000		0.8287		2.1064	Lbs. Per MMcf

1C - CONTROL EQUIPMENT

4.3 AFTERBURNER AIR POLLUTION CONTROL SYSTEM

4.3.1 INTRODUCTION

The air pollution control system consists of a regenerative afterburner thermal incineration system, which uses temperatures up to 1800°F to burn off organic and particulate contaminants in the sludge heat drying system process air stream. See Figure 4-6, "Afterburner Air Pollution Control System."

The system achieves a high thermal efficiency through an automatic alternation of the operation of two combustion chambers in conjunction with the ceramic bed afterburner central combustion chamber. The entire process is automatically controlled by a programmable logic controller (PLC).

The PLC is programmed for automatic start-up, shutdown, ramping of incinerator temperature, monitoring of safety interlocks, burnout cycle, operation of all inlet and bypass dampers, operation of the low fire gas recirculation system and dampers, and fault annunciation.

4.3.2 DESIGN CRITERIA

Fan

Quantity	1
Manufacturer	Robinson Industries Inc.
Type	RB1212
Size	60 x 4-1/8
Serial No.	419-90
Drawing No.	DA-60RB1212-101

Afterburner Fan Motor

Quantity	1
Manufacturer	General Electric
Model	5KS445BL209A

Serial No.	SE6215048
HP	200
Time Rating	Cont.
RPM	1785
Phase	3
Hertz	60
Volts	460
Power Factor	90.0
Max. KVAR	36.5
Amps	216
Max. Amb.	40°C
Ins. Class	F
NEMA Des.	B TE
Frame	445T
Type	KS
Code	6
NEMA Nom. Eff.	95.8
Guaranteed Min. Eff.	95.2
Drive End Bearing	AFBMA 90BL03JP
Opp. Drive End Brg.	AFBMA 70BC03JP3

4.3.3 CONTROL/INSTRUMENTATION DESCRIPTION

See Table 4-3 at end of Section 4.0.

4.3.4 VALVE TAG SCHEDULE

Does not apply to this section.

4.3.5 THEORY OF OPERATION

Afterburner

The afterburner is a ceramic bed-type afterburner. The purpose of the afterburner is to oxidize odor-causing constituents in the gas stream to nonodorous products of combustion. The ceramic bed afterburner consists of a central incineration chamber surrounded by a number of energy recovery chambers (lobes). These lobes contain ceramic heat exchange media

(stoneware). The odorous air enters an upper ring-shaped manifold. Inlet flow control valves direct the air into those lobes that are in inlet mode.

The air passes through the stoneware beds (that have been preheated in a previous cycle) and is heated by the stoneware. It enters the central chamber at a temperature very close to the incineration temperature. The oxidation process is completed in the central chamber. A gas burner maintains a preset incineration temperature.

One lobe at any given time is in idle mode or in transition from inlet to outlet mode or vice versa. Half of the other lobes are in inlet mode and half in outlet mode.

The air leaves the central chamber through the stoneware beds of those lobes in outlet mode. There the hot air gives up its heat to the stoneware and continues to the exhaust fan. The temperature of the air at this point is only slightly higher than that of the air entering the unit.

Each afterburner combustion chamber has two burners. The burners include gas train, combustion blower, and safety controls. The burner control system automatically brings the afterburner unit to operating temperature. The programmable logic controller regulates the temperature rise at a rate of approximately 500°F per hour.

When the unit reaches its set point, the central chamber temperature control takes over. There are at least five thermocouples which sense central chamber temperature, located as follows: one in the top dome, one in the bottom dome and three spaced along the central chamber. During shutdown the burner control system automatically controls the temperature cool down cycle. The thermocouple(s) which control the burnout cycle are located in the outlet manifold or outlet duct. Each energy recovery lobe has two thermocouples: one just inside the lobe's hot face and one just inside the cold face.

The retention time at the incineration temperature is at least 1.0 second. One by one the lobes change from inlet (preheat) mode to outlet (recovery)

mode and back to inlet mode. In this fashion, energy is absorbed from the clean purified air from the central chamber and stored in the heat exchange media to preheat the next cycle of incoming process fumes.

The ceramic bed-type afterburner is designed for an incineration temperature of 1800°F and combustion gas residence time of at least 1.0 second. The afterburner is furnished with an automatic emergency bypass. In the event of an overtemperature condition or an electrical power outage, this fail safe feature will place all inlet and outlet valves in full open position.

The afterburner is capable of operation in a reduced flow and temperature mode during periods of sludge dryer shutdown. This mode of operation is automatically actuated by instrumentation on the afterburner control panel.

The energy recovery chambers will gradually accumulate fine particulate matter that is not removed by the venturi particulate scrubber and cyclone separator. The particulate consists of sludge which is estimated to be 55 percent volatile and 45 percent inert. To help prevent buildup of these deposits, the afterburner incorporates a burnout feature in which the temperature of the stoneware bed is raised to a minimum temperature of 1200° F (at reduced gas flow) to burn out the deposited material. Only the organic or volatile fraction will be burned out (oxidized to CO_2 and H_2O vapor) and the inorganic fraction will remain.

Only one energy recovery chamber can be in the burnout mode at any time. The afterburner incorporates material of construction to permit the 1200° F burnout mode, namely: cold faces of high temperature curved ceramic block, valve collars, and flow control valves of high temperature construction.

The entire afterburner inlet duct (from the ID fan discharge to the afterburner inlet) and the afterburner bypass duct is constructed of stainless steel.

In the stainless steel inlet duct to the afterburner there is an afterburner bypass duct to atmosphere and a bypass duct damper. There also

are two dampers in the inlet duct, a pelletizer exhaust damper and an afterburner inlet damper. All three dampers have hydraulic actuators operated by the hydraulic power unit provided with the afterburner. The damper is controlled by the afterburner programmable logic controller and provides for the following operating modes:

1) Sludge pelletizer in operation with afterburner off, in which case the pelletizer exhaust damper and bypass duct damper are open and the afterburner inlet damper is closed.

2) Afterburner is in operation with pelletizer off, in which case the bypass duct damper and afterburner inlet damper are open and the pelletizer exhaust damper is closed.

3) Normal operating mode in which the pelletizer exhaust damper and afterburner inlet damper are open and the bypass damper is closed.

4) Emergency shutdown of either the pelletizer process or the afterburner, in which case the bypass damper opens and the damper of the nonoperating unit is closed and operating unit damper is open.

5) Start-up mode of the sludge drying train, in which case sequencing of the dampers will be required.

Recirculation System ← Not on Largo Afterburner

The afterburner has a gas recirculation duct which is used during low fire operation as a fuel conservation feature. When the afterburner is in a warm standby mode (pelletizer not in operation), the gas recirculation system can be activated in which case the recirculation duct damper will open and warm exhaust gas from the afterburner exhaust duct will be recirculated back to the inlet manifold. A small amount of combustion air from the atmosphere will be drawn through the recirculation duct inlet air damper. The operation and control of the gas recirculation system is fully

integrated into the logic of the afterburner's PLC. The recirculation duct damper has a hydraulic actuator operated by the afterburner hydraulic fluid system. The recirculation duct inlet air damper is a throttling damper and is an electric actuator.

Afterburner Exhaust Fan

The afterburner has a heavy-duty industrial centrifugal exhaust fan. The variable frequency drive automatically adjusts the fan flow rate (RPM) to maintain a preset negative pressure level in the afterburner inlet duct. Thus, the afterburner exhaust fan will be adjusted to match any changes in the dryer gas flow. The instrumentation required to control fan speed is provided in the afterburner control panel.

Exhaust Stack

The afterburner exhaust stack is a stainless steel ground-mounted, free-standing, self-supported, straight stack.

4.3.6 MODES OF OPERATION

The afterburner controls provide semiautomatic start-up of the unit; all controls have automatic safety shutdown features.

The control of the afterburner is integrated into the logic of the afterburner. When the afterburner is operating in the LOW FIRE mode and the ID fan is not operating, the bypass damper and inlet damper will both be in the open position. If the dryer system is operated without the afterburner in operation, the bypass damper is open and the inlet damper is closed. On failure condition of the afterburner or afterburner exhaust fan, the afterburner bypass damper will open and the afterburner inlet damper will close. If the dryer system ID fan fails or if the dryer burner malfunctions, the afterburner bypass damper will open and the afterburner inlet damper will close. On a full system start-up the following sequence occurs:

1D - STARTUP AND SHUTDOWN PROCEDURES

a. The afterburner is purged and brought up to operating temperature; then

b. The dryer system is purged and brought up to operating temperature; then

c. The bypass damper is closed. After this,

d. The dryer is ready to accept wet sludge.

An afterburner recirculation duct is provided to conserve fuel when the afterburner is in an idle (Low Fire) mode for an extended period of time (several hours). The logic in the afterburner programmable controller controls the position of the recirculation duct damper, the recirculation inlet damper and the afterburner inlet damper.

When the afterburner is in the LOW FIRE mode the position of the dampers are:

RECIRCULATION DAMPER	OPEN
AFTERBURNER INLET DAMPER	OPEN
RECIRCULATION INLET DAMPER	MODULATED

(to provide air flow through the afterburner)

In all other operating modes the recirculation duct and inlet dampers are closed. See Figures 4-7, 4-8, 4-9, 4-10 and 4-11.

4.3.7 START-UP AND SHUTDOWN PROCEDURES

Operator Action	Relay/Motor Starter/Pilot Light Response	PLC Response
1. Turn Power Off-On Switch On (SS-1)	Relays CR1.CR2 energize Pilot Light PL3 lights Provided that the combustion blower disconnects are on and the Loc/Rem switches are in Rem. MS6 & MS7 will energize.	Power is applied to PLC.

Operator Action	Relay/Motor Starter/Pilot Light Response	PLC Response
2. Turn Valves Switch to the "ON" Position	Relay CR262 deenergizes. DMC12 is powered and provided that the local valves switch is on, the valve drive motor will start to turn.	PLC input 301 will energize, provided that the system is not in the bakeout mode, PLC output 116 energizes.
	Valves are turning relay DR 177 will energize from PLC output, 115.	PLC will be constantly monitoring the valves turning via Rungs 1 through 5 in the program. As long as the valves are turning, output 115 will be energized.
3. Press Main Exhaust Fan. Start Push-button (PB16A-2)	Provided that there are no excessive temperatures CR115/CR 188, CR16A, 16B & 16C will energize. PL 18 will light and the fan will start. When the fan starts, its run contact will seal in the fan start circuit. The disc. switches must be on. The valves must be turning (CR177) and the Loc/Rem switch must be in Rem as well.	Since purge is still not complete this time, the main purge damper will remain all the way open. PL output 112 is energized.

Operator Action	Relay/Motor Starter/Pilot Light Response	PLC Response
	Provided that the air flow switch PS 21 senses flow, PL 20 and PL 21 will light.	
4. Press Purge Start Push-Button (PB22)	Provided that the main purge damper is open CR 135 energized, purge will begin. PT 22 start its timing cycle, as long as the bypass damper is open and the inlet damper is closed.	
	After purge is complete, CR energize PL 21.25 go off. PL 26 lights.	PL input 210 energizes energizing. PLC output 011. PLC output 214 energizes and 213 deenergizes.
	CR 175 energizes. PL 187 lights, PL 186 goes off.	System goes into standby mode. Output 113 energizes. Closing MA purge damper to its standby position.
	Provided that all safety pressure switches for all burners are closed, then relays CR 28, CR 58, energize.	Inputs 001, 002 are energized. Therefore, there are no interlock failures, rungs 23 through 26, 28, 29, 30, 36, 37.

Operator Action	Relay/Motor Starter/Pilot Light Response	PLC Response
5. Press Burner 1 and Burner 2 Start Push Buttons PB39-2,PB59-2	CR39, CR59 energize. Provided the proof of closure switches are closed, the burners at minimum position switches are closed. The flame safety relays will energize. PL434 and PL63 will light with its respective burner. As the above PL's light, their respective scanners must see flame.	Outputs 012, 013 will energize with its respective burner. Inputs 006, 007 will energize with its respective burner. Flame inputs 008,009, energize disabling the flame fail alarm rungs, 16 through 21, 29, 30, through 35, 37
	Provided that UDL 3000 instruments have been set up, burner control will be accomplished automatically.	
	Other alarms consist of excessive chamber and excessive exhaust temperatures, combustion blowers off. All alarms can be silenced with the alarm silence pushbutton and reset when pressed a second time. The ignition failure alarms must be reset at the flame safety relays first.	Rungs 38 through 93 are the remaining alarm circuits.
	Burners will turn on and off automatically. CR163, CR164 will energize and deenergize based on the individual burner temperature and the central chamber temperature.	Rungs 14 through 15, 94 through 97.

Operator Action		Relay/Motor Starter/Pilot Light Response	PLC Response
		Any burner that fails when the other burner is off will bring the system back to a pre-purge condition; CR211 will deenergize.	Rungs 98 through 100
6.	Turn Bakeout The On Position (SS86)	Both burner controllers go to a second and lower setpoint. PL206, PL207, PL208 will light when their respective recovery chambers are in a bakeout condition.	Outputs 411, 412, 413
		A recovery chamber will be in a bakeout condition when: 1. Its proximity switch senses its position PRS 206-PRS 207, PRS 208. 2. Its respective temperature switch is at the setpoint TIS 141, TIS 144, TIS 147.	Rungs 112 through 129
		Bakeout time is determined by the Bakeout minute timer and minute counter in the PLC.	Rungs 120—126

Start-up Sequence

1. Energize the 460 volt main disconnect.
2. Energize the control panel.
3. Check the following instruments for their respective setpoints and alarms.

a. Excessive combustion chamber temperature 1800 deg. F. (482 Deg. C.).
b. Excessive exhaust temperature 600 deg. F.
c. Place the pressure/volume controller in the "AUTO" mode.
d. Reset above if necessary.

4. Press "RESET"/"SILENCE" pushbuttons on the panel door.
5. Turn the "valve drive" switch on the panel door to the "ON" position. The "valves rotating" indication light will come on within three (3) minutes.
6. Place the "Combustion Blower" switch on the panel door to the "MAN" position. The "Combustion Blower" indication lights will come on.
7. Press the exhaust fan "START" pushbutton. The "Exhaust Fan" indication light will come on. After a 30 second delay, the "Purge Ready" indication light will come on.
8. Press the "Purge Start" pushbutton. The "purging" indication light will come on. The oxidizer purge damper will open and the purge timer will start. The "Purge Complete" indication light will come on after the purge timer has timed-out, and the purge damper will drive to its standby position. The exhaust fan vortex damper will be modulating the system's inlet pressure at this point.
9. Press Burner #1 "START" and Burner #2 "START" pushbuttons. This will light the burner's pilot flame, and within three (3) seconds, will light the main flame (at the minimum position). Burner #1 and Burner #2 "flame on" indication lights will come on. Each burner's flame strength will be displayed on their flame strength meter. The pilot flame will turn off.

   The control of the burner position will be relesed to the Honeywell UDC-3000 controller.
10. Check each of the burner controllers to make sure its in the "AUTO" mode and above 1,500 deg F. setpoint.

    All process exhaust dampers will remain vented to atmosphere until the combustion chamber temperature is above 1,400 Deg F., and all process ovens have completed their purge.

11. At 1,400 Deg F. process ovens are enabled to the oxidizer, when "Cust CONTACT" is completed for a respective process a delay timer is initiated (30-60 sec.), after which time the process is connected to the oxidizer. The VFD will be released to the ramp control and the PV controller will modulate to hold setpoint. When the "Cust Contact" is opened an "Off Delay" time is started (3-10 minutes) to fully purge process, followed by process to atmosphere.
12. Loss of any of the following parameters will force all process exhaust dampers to atmosphere:
    a. Main Oxidizer Exhaust Fan
    b. Valves Rotating
    c. Oxidizer above 1,400 Deg. F.

Shutdown Sequence

1. Turn the combustion blower switch to "AUTO" position.
2. Press the "STOP" pushbutton for Burners #1 and #2.
3. Press the "STOP" pushbutton for the main exhaust fan.

Note: The combustion blowers will remain on until the combustion chamber is shut off automatically when this chamber is below 200 Deg F.

Do not turn off the combustion blowers or the control panel power until the combustion chamber is below 200 Deg F. Permanent damage to the burner will occur.

4.3.8 ROUTINE OPERATING CHECKLIST

A weekly visual inspection should be made to insure all components are working satisfactorily: the main exhaust fan, valves and valve drive system, burners, and controller setpoints. Failure of any of these components will cause the system to shut down and the control panel's alarm to sound.

1E – OPERATION AND MAINTENANCE PLAN

[Rule 62-213.440(1), F.A.C.]:

Operation and Maintenance Plan

A.18. Pursuant to Rules 62-297.700(6), F.A.C. and the Pinellas County Code 58-128., as amended, the permittee shall comply with the Operation and Maintenance (O&M) Plan:

a. Sludge pelletizer cyclones for each train.

1. Source Designator: Sludge Drying Train
2. Cyclone (dry scrubber) Manufacturer: Fisher-Klosterman
3. Model Name and Number: XQ Series XQ340-27 Dual Cyclones
4. Design Flow Rate: 17,172 ACFM
5. Efficiency Rating At Design Capacity: 94.29%
6. Pressure Drop: 4.76 inches W.C. at Full Load
7. Stack Gas Exit Temperature: N/A exhausts to scrubber/afterburner
8. Stack Height: N/A exhausts to scrubber/afterburner
9. Stack Diameter: N/A exhausts to scrubber/afterburner
10. Stack Velocity: N/A exhausts to scrubber/afterburner
11. Process Controlled By Collection System: Emissions from sludge drying train
12. Total Material Handling Rate:
    32,680 lbs./hr. sludge input rate to Dryer Train No. 1
    32,680 lbs./hr. sludge input rate to dryer Train No. 2
13. Operation Schedule: Only 1 of the 2 trains may operate at any one time for a total operating time of 8760 hrs./yr.

b. Sludge pelletizer scrubbers for each train.

1. Source Designator: Sludge Drying Train
2. Scrubber Manufacturer:
    Train No. 2 - Fisher-Klosterman
    Train No. 1 - Poly con Corporation
3. Model Name and Number: Train No. 2 - MS-520.000-M
    Train No. 1 - 1514SS
4. Measured Flow Rate: Train No. 2 - 18,898 ACFM
    Measured Flow Rate: Train No. 1 - 18,802 ACFM
5. Efficiency Rating At Design Capacity:
    Train No. 2 - 99.03%
    Train No. 1 - 99.03% based on data from Train No. 2
6. Design Pressure Drop: Train No. 2: 6 - 13 inches W.C.
    Train No. 1: 6 - 13 inches W.C.
7. Fans Current at Rated Voltage: 173 amperes-Train No. 1
    167 amperes-Train No. 2
8. Liquid Feed Rate: 200 gpm, maximum

9. Stack Gas Exit Temperature: N/A exhausts to afterburner
10. Stack Height: N/A exhausts to afterburner
11. Stack Diameter: N/A exhausts to afterburner
12. Stack Velocity: N/A exhausts to afterburner
13. Process Controlled By Collection System: Emissions from sludge drying train
14. Total Material Handling Rate:
    32,680 lbs./hr. sludge input rate to Dryer Train No. 1
    32,680 lbs./hr. sludge input rate to dryer Train No. 2
15. Operation Schedule: Only 1 of the 2 trains may operate at any one time for a total operating time of 8760 hrs./yr.

c. Afterburner serving 2 sewage sludge drying trains 1 at a time. 021

1. Source Designator: Sludge Drying Train
2. Afterburner Manufacturer: Huntington Energy System, Inc.
3. Model Name and Number: Model #65
4. Design Flow Rate: 20532 ACFM
5. Efficiency Rating At Design Capacity: 95%
6. Stack Average Temperature: 240 degrees F
7. Stack Height: 65 feet
8. Stack Diameter: 38 inches
9. Stack Gas Exit Velocity: 36 fps
10. Stack Moisture Content: 8%
11. Process Controlled By Collection System: Emissions from sludge drying train
12. Total Material Handling Rate:
    32,680 lbs./hr. sludge input rate to Dryer Train No. 1
    32,680 lbs./hr. sludge input rate to dryer Train No. 2
13. Operation Schedule: Only 1 of the 2 trains may operate at any one time for a total operating time of 8760 hrs./yr.

d. The following observations, checks, and operations apply to the cyclones, scrubbers, and afterburner and shall be conducted on the following schedule as specified:

Daily

1. Observe stack (visual).
2. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, etc.).
3. Note any unusual occurrence in the process being ventilated.
4. Observe all indicators on control panel.
5. Check bearing oil level for fan.

6. Complete Log Sheet Indicating:

   Pugmill speed/amps
   Ratio wet/dry
   Dryer temp. in/out
   Belt scales
   Sludge feed
   Polymer feed
   Belt speed
   Hydraulic psi
   RTO fan amperes
   RTO combustion chamber temp.
   % solids cake/pug/prod
   Recycle bin level/high temp
   product silos level/high temp
   Incline wet screw amperes

Weekly

1. Record afterburner's bearing temps.

Monthly

1. Inspect fan/housings for corrosion and material build-up/
2. Check all drive belts for wear and tensions.
3. Check scrubber differential pressure.
4. Check scrubber H_2O flow rate.
5. Check scrubber H_2O inlet pressure
6. Lubricate RTO fan damper bearings.
7. Confirm vibration detection equipment is operational.
8. Lubricate flow control valve drive system.

Every 2 Months

1. Inspect scrubber nozzle and spray bars.
2. Inspect cyclone interior.

Every 6 Months

1. Inspect fan damper and packing.
2. Inspect fan impeller.
3. Inspect fan impeller seal.
4. Check torque anchor and lag bolts.
5. Calibrate vibration detectors.

6. Change bearing oil.
7. Inspect chamber flow control valve packing (6 valves).
8. Lubricate chamber flow control valve bearings (6 valves).
9. Inspect bypass flow control valve packing (4 valves).
10. Change oil valve drive system gearbox.

Annually

1. Check all bolts and welds.
2. Grease motor.
3. Inspect chamber insulation.
4. Inspect ceramic support.
5. Inspect and adjust gas burners.
6. Leak test gas piping system.
7. Calibrate process instrumentation.

e. A list of the type and quantity of required spare parts for the pollution control devices which are stored on the premises.

f. A record log which will indicate, at a minimum:

1. When maintenance was performed.
2. What maintenance was performed.
3. Why maintenance was performed.
4. Who performed the maintenance.

g. Records of inspections, maintenance, and performance parameters shall be made available to the Department of the PCDEM upon request.

[Rule 62-213.440(1), F.A.C.]:

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 1F
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☒ Not Applicable

1F - APPLICABLE REQUIREMENTS

APPLICABLE REQUIREMENTS

See Document E

EMISSION UNIT ID NO. 003 – PELLETIZER BUILDING WITH ODOR CONTROL SYSTEM NO. 1

EMISSIONS UNIT INFORMATION
Section [2] of [4]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Pelletizer building with odor control system No. 1

3. Emissions Unit Identification Number: 001

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [ ] Yes [X] No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Two 10 ft diameter wet scrubbers using sodium hydroxide and sodium hypochlorite remove H_2S from the building exhaust. (The systems are in cold storage until needed). Accidental releases of chlorine are controlled by a 10 ft diameter wet scrubber.

2. Control Device or Method Code(s): 001

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 16.34 TPH	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 50 feet	7. Exit Diameter: 4 feet
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: 35,500 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

2. Segment Description (Process/Fuel Type): Sludge processing and pelletizing		
2. Source Classification Code (SCC): 5-01-005-06	3. SCC Units: tons processed	
4. Maximum Hourly Rate: 16.34	5. Maximum Annual Rate: 143,664	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: The building uses Odor Control System No. 1		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Firing with natural gas		
2. Source Classification Code (SCC): 3-90-006-99	3. SCC Units: MMCF Burned	
4. Maximum Hourly Rate: 0.0135	5. Maximum Annual Rate: 118.47	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1050
10. Segment Comment: Dryer fired at 12 mmbtu/hr Afterburner fired at 2.2 mmbtu/hr		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
H_2S	**001**		**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: H_2S	2. Total Percent Efficiency of Control: 99
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions:	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Unit in cold storage. Scrubbers will reduce H_2S by 99%	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation __of __

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation _____ of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 2A [ ] Previously Submitted, Date

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 2B [ ] Previously Submitted, Date

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 2C [ ] Previously Submitted, Date
   [ ] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 2D [ ] Previously Submitted, Date
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID:
   Test Date(s)/Pollutant(s) Tested:

   [ ] Previously Submitted, Date:
   Test Date(s)/Pollutant(s) Tested:

   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested:
   [X] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

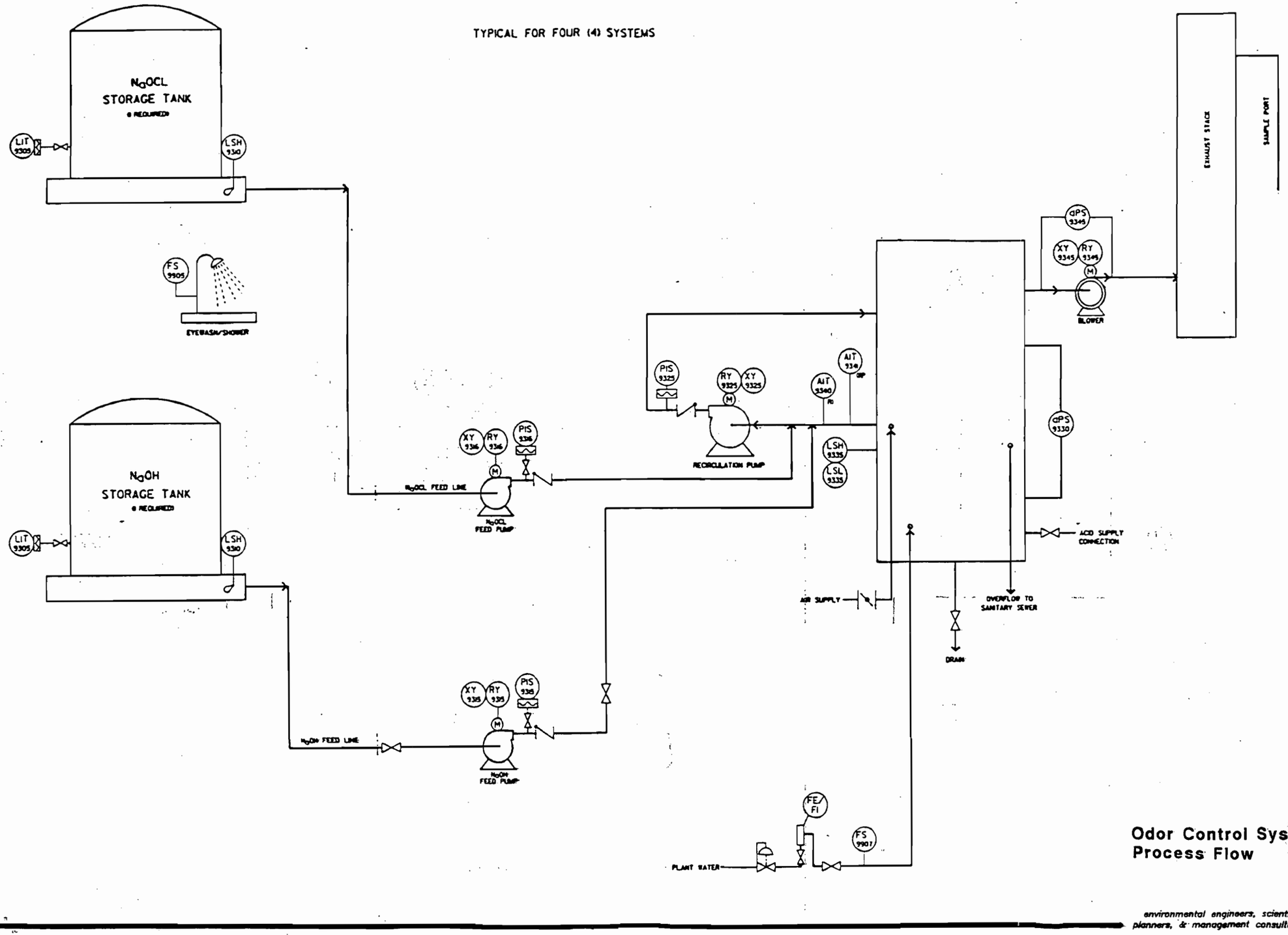
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 2E
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID:
      ☐ Previously Submitted, Date:
   ☒ Not Applicable

Additional Requirements Comment

2A - PROCESS FLOW DIAGRAM

TYPICAL FOR FOUR (4) SYSTEMS



Odor Control System
Process Flow

environmental engineers, scientists, planners, & management consultants

CDM

FIGURE 1-9

2B - CONTROL EQUIPMENT DESCRIPTION

Rpm	1,780
Lower or Shaft End BRG	6313-ZZ-J/C3
Upper or Opp. End	6212-ZZ-J/C3
ID#	(1)G4423/U0ZT3250019R-3
	(2)G4423/U0ZT3250019R-1
	(3)G44423/V0ZT3250019R-2
NEMA Nom. Eff.	95.0
F.L.	PF 87.5
MaX. KVAR	12.9

4.4.3 CONTROL/INSTRUMENTATION DESCRIPTION

See Table 4-4 at end of Section 4.0.

4.4.4 VALVE TAG SCHEDULE

Please refer to Appendix B.

4.4.5 THEORY OF OPERATION

The odor control system is designed to adsorb odorous gases out of an airstream through countercurrent contacting with water or a water-based oxidizing or reducing solution. The contacting occurs in the packed tower(s) which are designed for a specific air flow rate and liquid recycle rate. Altering liquid or gas rates from design rates will affect tower performance. See Figure 4-15, Odor Control System Process Flow.

The liquid adsorbant flows downward through the column packed section adsorbing the odorous gases out of the airstream that is drawn upward through the packing by the induced draft fan. Column packing is simply an inert geometric surface designed to optimize the area for liquid/gas contacting thus promoting absorption efficiency. A sump located in the base of the column collects the liquid and returns it to the top of the tower(s) via recycle pump(s) and piping. Located in the top of the tower is the liquid distribution spray header which evenly distributes the recycle liquid over the surface of the packed bed. Above the distributor

is an entrainment separator pad or blade module used to remove liquid droplets entrained in the airstream from the spray.

Control of the recycle liquid chemistry is required to maintain optimum odor removal efficiency. To effectively scrub odorous contaminants a sodium hypochlorite/sodium hydroxide (pH greater than 8.0) solution is used. The pH and the ORP (oxidation reduction principle) of the scrubbing solution is monitored with analyzers and probes. As odorous gases are absorbed and reacted in solution, additional chemical is required to maintain an optimum concentration. The analyzers respond to the probe measurement signal, activating the chemical metering pumps when a low setpoint is reached and feeds concentrated chemical from the storage tanks into the recycle system of the tower until a high setpoint is reached. Chemical addition will cease until the low setpoint is reached again.

In addition to chemical make-up, reuse water is automatically fed to the tower recycle system on a continuous measured basis. This is adjusted with an inline valve and the reuse make-up water replaces water lost through evaporation and more importantly it dilutes and flushes out the reaction products in the tower solution through an overflow drain. Without overflow, reaction products would rapidly build up in the tower solution to the point of saturation. Precipitation of these products would occur resulting in plugged packing, piping, pump, sump buildup and possible blockage of the entrainment separator.

Theory of Odor Control

The evaluation of existing or potential odor or corrosion problems requires a knowledge of the types of compounds likely to cause such problems and their formation in wastewater systems. Prediction of where these problems will occur in new systems is necessary so that designs can be tailored to minimize odor and corrosion.

Odor-producing substances found in domestic wastewaters and sludge are small, relatively volatile molecules. Most of these substances result from the anaerobic decomposition of organic matter containing sulfur and nitrogen. Inorganic gases produced from domestic wastewater decomposition

commonly include hydrogen sulfide, ammonia, carbon dioxide, and methane. Of these gases, only hydrogen sulfide and ammonia are odorous. See Table 4-5, Odorous Sulfur Compounds in Wastewater, at end of Section 4.0.

Hydrogen Sulfide (H_2S)

Hydrogen Sulfide (H_2S) is the most common and prevalent odorous gas associated with domestic wastewater collection and treatment systems. See Figure 4-16, The Sulfur Cycle. H_2S has a characteristic rotten egg odor, is extremely toxic, and is corrosive to metals such as iron, zinc, copper, lead, and cadmium. H_2S is also a precursor to the formation of sulfuric acid which corrodes lead-based paint, concrete, metals, and other materials.

The following conditions required for H_2S corrosion are listed below:

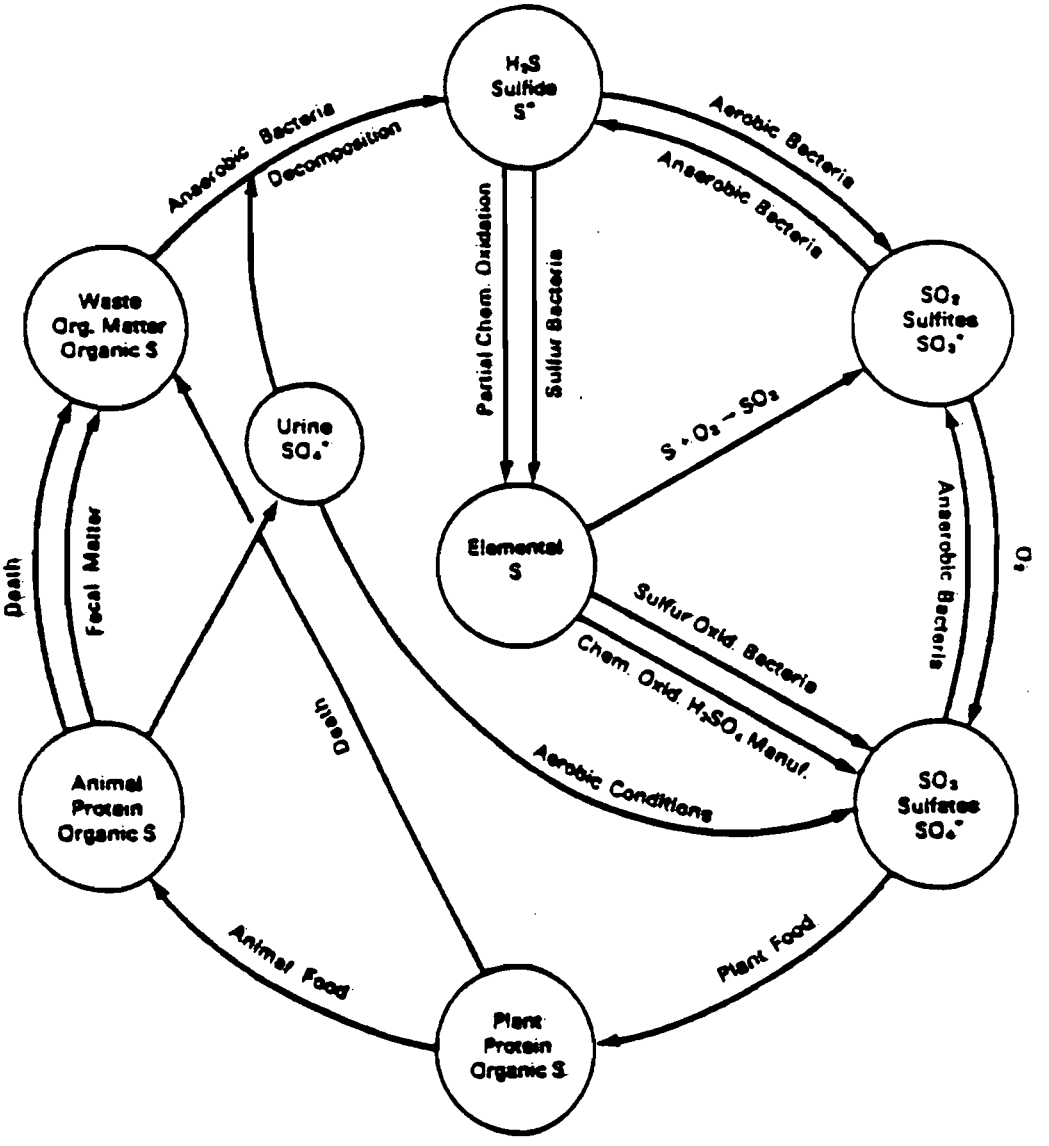
- Presence of dissolved sulfides in the wastewater.
- Release of H_2S gas from the water phase to the gaseous phase.
- Biological oxidation of H_2S to sulfuric acid above the wastewater surface in a pipe or basin.
- Acid attack on the moistened surfaces of cement or metallic surfaces exposed to the atmosphere.

The conditions leading to the formation of H_2S generally lead to the production of other malodorous organic compounds. Resolving H_2S related odors can often solve other odor problems as well.

The serious odor and corrosion problems associated with the collection, handling, and treatment of domestic wastewater are primarily the result of the reduction of sulfate to H_2S under anaerobic conditions. The following reaction shows this reduction condition.

$$SO^{=} + \underset{\text{matter}}{\text{organic}} \xrightarrow[\text{bacteria}]{\text{anaerobic}} S^{=} + H_2O + CO_2$$

$$S^{=} + 2H^{+} \longrightarrow H_2S$$



The Sulfur Cycle

In the chemical oxidation of organic matter, bacteria gain energy by removing hydrogen atoms from the organic molecule. Through a series of biochemical reactions, the hydrogen atoms are transferred to a hydrogen acceptor. The hydrogen acceptor may be an inorganic or organic substance.

Physical and Chemical Properties of Hydrogen Sulfide

H_2S is a colorless gas that has a foul odor (a rotten egg smell) and is slightly heavier than air. Human exposure to small amounts of H_2S in the air can cause headaches, nausea, and eye irritation. Higher concentrations can cause paralysis of the respiratory system which results in fainting and possible death. H_2S gas at 0.2 percent is fatal to humans after exposure for a few minutes. H_2S gas is explosive at concentrations from 4.3 to 45.5 percent in air.

The rotten egg odor of H_2S gas is only detectable at low concentrations; at high concentrations, H_2S odors are not generally detectable. A person's ability to sense dangerous concentrations by smell is quickly lost. If the concentration is high enough, unconsciousness will come quickly, followed by death if there is not a prompt rescue. Many times, rescue attempts are ill-fated since a person may not consider his own safety in trying to save a coworker's life. See Table 4-6, Hydrogen Sulfide Toxicity Spectrum, at end of Section 4.0.

Wet Scrubbers

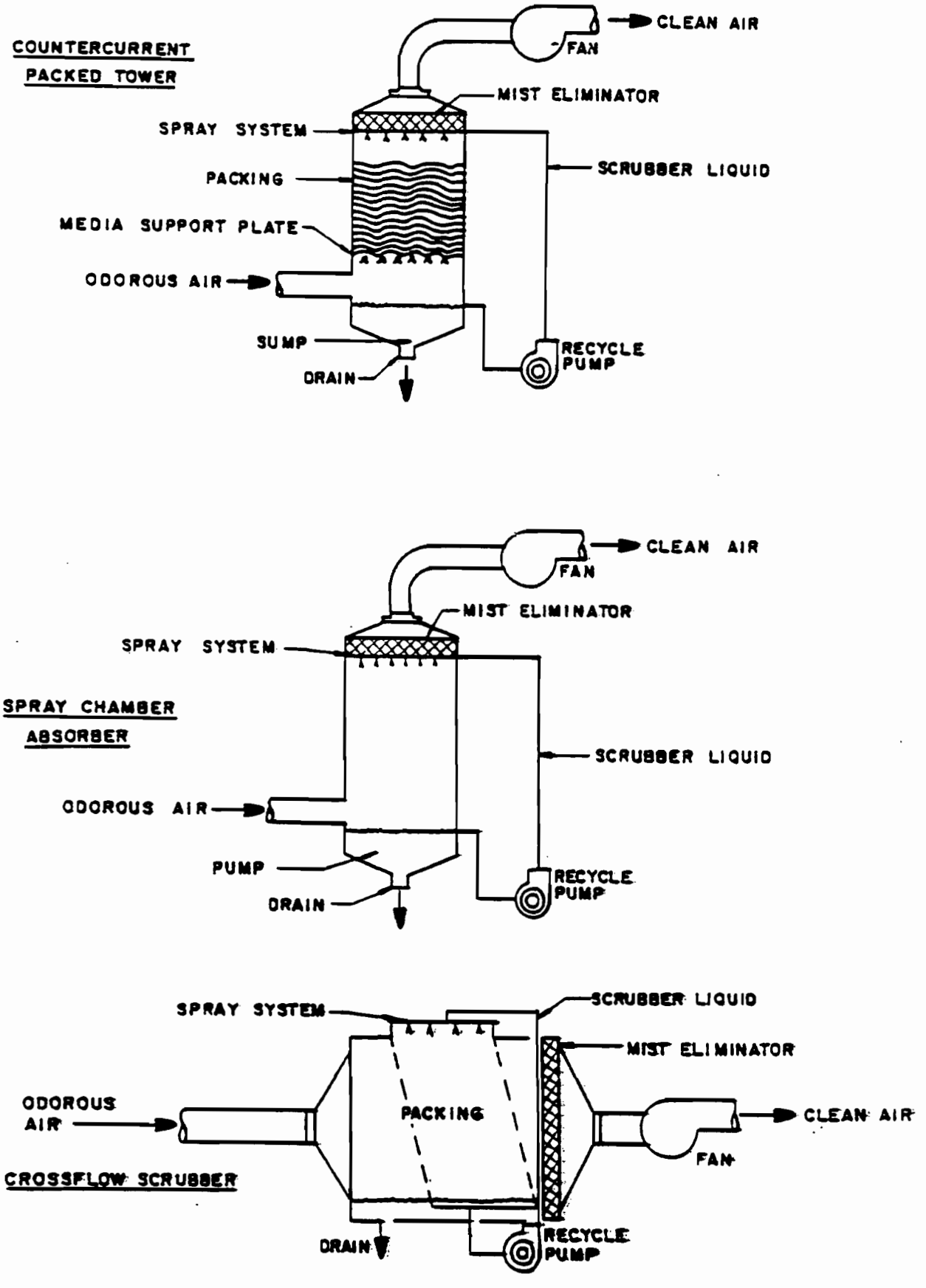
Wet scrubbing involves contact of an odorous gas with a scrubber solution to allow transfer of the odorants from the gas stream to the scrubber liquid. Typically, a countercurrent or cross-directional flow pattern is necessary for effective odor control within a wet scrubber unit. Transfer of the odorants from the gas stream to the scrubber liquid takes place by one or more of the following processes:

- Condensation of odorous vapors.
- Removal of odorous particulates.
- Odor absorption into the scrubbing solution.
- Emulsification of odorous gases in a chemical reagent.

Wet scrubbing systems are often suited for the treatment of large air flows contaminated with low odor threshold compounds, such as mercaptans and H_2S. Scrubber designs may be of the vertical, countercurrent type, or horizontal cross-flow type. See Figure 4-17, Wet Scrubbers. A typical countercurrent system includes spray nozzles for injection of the scrubbing solution and a packing material to provide a gas/liquid contact. The gas stream enters the bottom of the scrubber unit and passes upward through the packing material. The scrubber liquid is sprayed downward into the packing material which irrigates the gas stream. Some wet scrufor gas/liquid contact, thereby eliminating the need for any packing material. These units are often referred to as spray chambers.

The selection of a scrubbing liquid is dependent on the specific odorants to be removed. Water soluble gases such as H_2S, ammonia, and organic sulfur; organic nitrogen compounds such as amines and organic acids; and chlorine compounds may be removed by scrubbing with water. It is common practice, however, to use a reactive chemical such as chlorine, potassium permanganate, hydrogen peroxide, sodium hydroxide, or ozone in the scrubbing liquid. In some cases, acidic or alkaline solutions can be used to neutralize the odorous compound or to adjust the pH for better performance when used in combination with another additive.

Equipment requirements for a wet scrubber system are dependent on the type of scrubber used and the scrubbing liquid employed, the volume and concentration of the odorous air, and the desired removal efficiency. A typical single countercurrent scrubber uses an enclosed tower containing packing material such as Raschig or Pall rings, a media support plenum, a scrubber solution distribution system, a mist eliminator, and an exhaust fan. Packing material can be plastic, ceramic, metal, or graphite with shapes ranging from rings, spheres, or saddles, to porous beds of fibers. The scrubbing solution feed loop consists of a chemical solution tank, metering pump and piping, a recirculation pump, and associated piping and valves. Instrumentation and controls are incorporated to monitor the pressure drop through the tower, or the pH within the liquid pool in the bottom of the scrubber tower, and to allow the addition of make-up water for a consistent liquid level and bulk chemical for a consistent quality of the scrubber liquid.



Wet Scrubbers

environmental engineers, scientists, planners, & management consultants

CDM

FIGURE 4-17

2C - STARTUP AND SHUTDOWN PROCEDURES

4.4.6 MODES OF OPERATION

The odor control system operates in a continuous/automatic mode of operation.

The odor control system is manually started by the operator and should run continuously in the AUTOMATIC mode to oxidize the H_2S in the air taken into the system. The recirculation pump will operate continuously and the chemical feed pumps will start and stop automatically based on the analyzer controller system.

4.4.7 START-UP AND SHUTDOWN PROCEDURES

Start-Up

1. Open the odor control system inlet pipe isolation valves.
2. Open the scrubber inlet butterfly valves.
3. Close the scrubber bypass butterfly valves.
4. Open the reuse water line valves to the recirculation pump seal water.
5. Open the reuse water distribution pipe to the scrubber.
6. Open the recirculation pump inlet valves.
7. Open the recirculation pump discharge valve.
8. Open all instrument and gauge isolation valves.
9. Open the sodium hydroxide and sodium hypochlorite feed line isolation valves.
10. Open the chemical feed pump inlet valves.
11. Open the chemical feed pump discharge valves to the scrubber.
12. Turn on the MCC breaker for the system control panel.
13. Turn on the main disconnect for the local control panel.
14. Place the NaOH feed pump HAND/OFF/AUTO selector switch to the "HAND" position.
15. Place the NaOCl feed pump HAND/OFF/AUTO selector switch to the "HAND" position.
16. Place the NaOCl recycle pump HAND/OFF/AUTO selector switch to the "HAND" position.

17. Allow the chemical feed pumps to run until the pH is in the design range.
18. Place the blower HAND/OFF/AUTO selector switch to the "HAND" position.
19. Once the pH is in the desired range, place the NaOH feed pump HAND/OFF/AUTO selector switch in the "AUTO" position.
20. Once the ORP is in the desired range, place the NaOCl feed pump HAND/OFF/AUTO selector switch in the "AUTO" position.
21. Adjust the airflow rate by adjusting the discharge butterfly damper valve to produce the desired flow rate.
22. A velometer (pilot tube with Magnehelic differential pressure gauge) indicates flow rate according to the formula:

    Flow Rate (CFM) = Velocity (FPM) * Duct Area (Sq. Ft.)

    At the design flow rate, the differential pressure across the packing should be noted in inches w.g. and routinely recorded.

    The system is now in a self-sustained automatic operation. The chemical feed pumps will start and stop as required to maintain the pH and the ORP in their desired ranges.

Complete Shutdown

1. Place the NaOH feed pump HAND/OFF/AUTO selector switch in the "OFF" position.
2. Place the NaOCl feed pump HAND/OFF/AUTO selector switch in the "OFF" position.
3. Press the recycle pump "STOP" pushbutton.
4. Close the chemical feed pump isolation valves.
5. Close the recirculation pump isolation valves.
6. Place the blower HAND/OFF/AUTO selector switch in the "OFF" position.
7. Close the scrubber's discharge valves.
8. Close the scrubber's inlet valves.
9. If the shutdown is for a long-term (one day or more), open the scrubber drain valve and drain the unit.

10. Turn off the main disconnect for the system local control panel.
11. Turn off the MCC for the system local control panel.
12. Close the reuse water distribution line to the wet scrubber.

4.4.8 ROUTINE OPERATING CHECKLIST

The following items associated with the odor system should be monitored each shift:

1. Check the system valving for proper positioning.
2. Check the recirculation pump for proper delivery and leaking conditions.
3. Check the recirculation rate.
4. Check the scrubber water make uprate controllers for proper operation (sufficient flow without flooding and diluting the pool chemical concentration).
5. Check the chemical feed pumps for proper operation, proper delivery rate from the storage, and any leaking conditions.
6. Check the pH and ORP readings.
7. Check the blower for the generation of excess heat, vibration, noise, and/or burning odors.
8. Check the system air flow rate velometer reading and differential pressure.
9. Every three months the scrubber spray nozzles should be checked for plugging.

4.4.9 PROCESS CONTROL PARAMETERS

The major process control parameter associated with the odor control system is the quality of "finished air" being exhausted from the blower fan.

The major function of the entire system is to scrub the odorous air with a chemical solution that will saturate and attack the molecules which compound the H_2S and other odorous gases. Making an "odor-smell" tour of the facility area is the best indicator of the odor control system's

2D – OPERATION AND MAINTENANCE PLAN

B.7. The permittee shall operate the scrubbers with odor controlling chemicals (sodium hydroxide and sodium hypochlorite) when odor complaints are received from any of the following: the Department, Pinellas County Department of Environmental Regulation (PCDEM), or the City of Largo. If such complaint(s) are received, the City of Largo will operate the scrubbers with the odor controlling chemicals until:

a. The odors are determined to be emanating from a source other than the pelletizing building, or
b. The upset in the pelletizing building is abated, and
c. The City of Largo receives written permission from the PCDEM to cease the operation of scrubbers with odor controlling chemicals.

[Rule 62-4.070, F.A.C., AO52-217761]

Operation and Maintenance Plan

B.8. Pursuant to Rules 62-297.700(6), F.A.C. and the Pinellas County Code 58-128., as amended, the permittee shall comply with the following Operation and Maintenance (O&M) Plan:

a. Process parameter for each scrubber.

1. Source Designator: Odor Control System No. 1 which consists of two scrubbers
2. Scrubbers' Manufacturer: Met-Pro corporation/Duall Division
3. Model Name: Duall Packed Scrubber Towers #P510-120 Serial No. 2269
4. Design Air Flow For Each Scrubber: 35,500 SCFM
5. Efficiency Rating For Each Scrubber At Max. Design: 99%
6. Reclaimed Water (1-6 ppm CL_2) From Waste Water Treatment Plant: 200 gpm design.
7. Stack Gas Temp. For Each Scrubber: Ambient
8. Stack Exit Diameter For Each Scrubber: 48 inches
9. Stack Exit Velocity For Each Scrubber: 2,800 fpm
10. Oxidation/Reduction Potential (ORP), 575- 675 mv.
11. pH Range, minimum of 8.
12. Stack Water Vapor Content For Each Scrubber: 100%
13. Process Controlled: Odors from the pelletizer building which includes the belt filter presses and wet storage bins.
14. Operation Schedule: 8760 hrs./yr.

b. The following observations, checks, and operations apply to each scrubber and shall be conducted on the following schedule as specified:

2E - APPLICABLE REQUIREMENTS

APPLICABLE REQUIREMENTS

See Document E

EMISSION UNIT ID NO. 005 – TWO SLUDGE STORAGE SILOS

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Two sludge storage silos

3. Emissions Unit Identification Number: 005

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			49	[ ] Yes [X] No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Both silos are vented into an American Air Filter Arrestall AR-30 baghouse.

2. Control Device or Method Code(s): 018

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 0.76 TPH	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 45 feet	7. Exit Diameter: 1.2 feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: 800 –1,650 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude… Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

3. Segment Description (Process/Fuel Type): Loading of storage silo		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: tons processed	
4. Maximum Hourly Rate: 0.76	5. Maximum Annual Rate: 6,657.6	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: SCC code for cement raw material transfer		

Segment Description and Rate: Segment __ of ___

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**018**		**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99
3. Potential Emissions: 0.2057 lb/hour 0.901 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.03 gr/dscf Reference: Rule 62-296.700,F.A.C.	7. Emissions Method Code: 0
8. Calculation of Emissions: 0.03 gr/dscf x lb/7,000 gr x 800 dscfm x 60 min/hr = 0.2057 lb/hr 0.2057 lb/hr x 8,760 hrs/yr x ton/2,000 lbs = 0.911 tons/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.03 gr/dscf	4. Equivalent Allowable Emissions: 0.2057 lb/hour 0.901 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Testing by EPA Method 9 per Rule 62-296.711(3)(c),F.A.C. Permit 1030060-002-AV limits each silo to 0.12 lbs/hr and 0.53 tons/yr	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE5	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Testing by EPA Method 9 per Rule 62-296.711(3)(c),F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 3A [ ] Previously Submitted, Date

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 3B [ ] Previously Submitted, Date

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 3C [ ] Previously Submitted, Date
   [ ] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 3D [ ] Previously Submitted, Date
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID:
   Test Date(s)/Pollutant(s) Tested:

   [X] Previously Submitted, Date:
   Test Date(s)/Pollutant(s) Tested: 7/15/03

   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested:

   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 3E
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☒ Not Applicable

Additional Requirements Comment

3A - PROCESS FLOW DIAGRAM

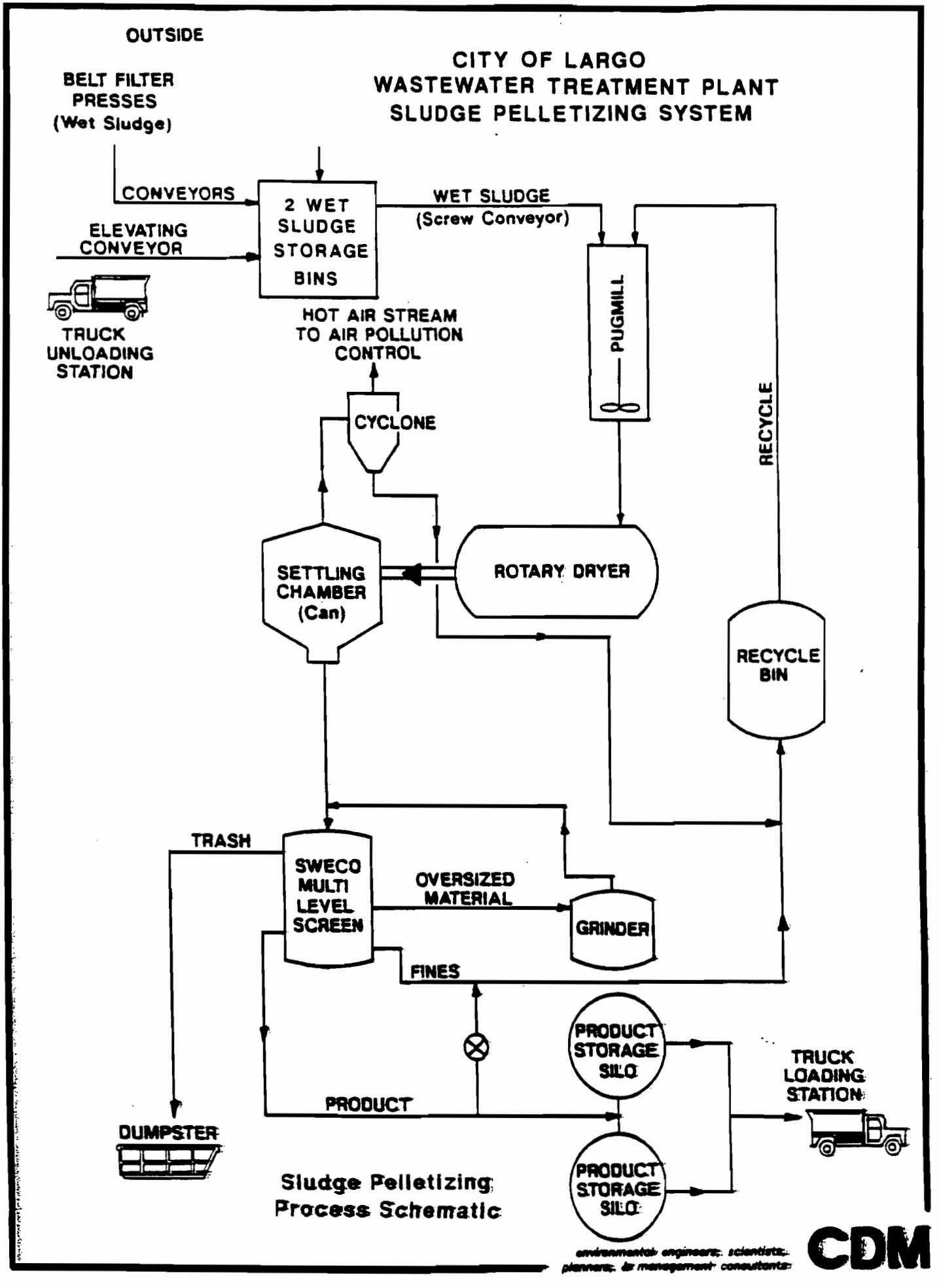

OUTSIDE
CITY OF LARGO
WASTEWATER TREATMENT PLANT
SLUDGE PELLETIZING SYSTEM
BELT FILTER PRESSES (Wet Sludge)
CONVEYORS
ELEVATING CONVEYOR
2 WET SLUDGE STORAGE BINS
WET SLUDGE (Screw Conveyor)
PUGMILL
TRUCK UNLOADING STATION
HOT AIR STREAM TO AIR POLLUTION CONTROL
CYCLONE
RECYCLE
SETTLING CHAMBER (Can)
ROTARY DRYER
RECYCLE BIN
TRASH
SWECO MULTI LEVEL SCREEN
OVERSIZED MATERIAL
GRINDER
FINES
PRODUCT STORAGE SILO
TRUCK LOADING STATION
PRODUCT
DUMPSTER
PRODUCT STORAGE SILO
Sludge Pelletizing Process Schematic
environmental engineers; scientists; planners; & management consultants
CDM

FIGURE 4-1

3B - CONTROL EQUIPMENT DESCRIPTION

Recordkeeping and Reporting Requirements

C.7 In order to document compliance with the requirements of Condition C.1, the permittee shall maintain daily records of the following:

a. The dried sludge loading rate for each silo. The dried sludge loading rate for each silo is determined from Dryer Total Sludge Input Rate equation (see Condition A.15):

$$M = \frac{C\,(\%R - \%C)}{(\%R - \%M)}$$

Where: M = Dryer Total Sludge Input Rate (lbs./hr.)
C = Wet Sludge Feed Cake to Pugmill (lbs./hr.)
%M = Percent Solids of Dryer Input (Feed)
%C = Percent Solids of Wet Sludge Feed Cake
%R = Percent Solids of Recycled Dry Material to Pugmill

b. The process rate for the truck loading area.

c. The hours of operation for the sludge storage silos and truck loading area.

These records shall be recorded in a permanent form suitable for inspection by the Department or PCDEM upon request.
[Rule 62-4.070(3), F.A.C.]

Operation and Maintenance Plan

C.8. Pursuant to Rules 62-297.700(6), F.A.C. and the Pinellas County Code 58-128., as amended, the permittee shall comply with the Operation and Maintenance (O&M) Plan:

a. Process parameters for each storage silo.

1. Source Designator: Storage silo for dried sludge
2. Baghouse Manufacturer: American Air Filter
3. Model Name: Arrestall AR-30
4. Design Flow Rate: 800 - 1650 cfm
5. Efficiency Rating at Design Capacity: 99%
6. Pressure Drop: 6 1/2" - 4" WG
7. Air to Cloth Ratio: 3.4
8. Bag Material: Cotton Sateen
9. Bag Cleaning Conditions: Periodic/Automatic Shaker
10. Gas Temperature: Ambient
11. Stack Height Above Ground: 45 ft.
12. Exit Dimension: 160 sq. inches
13. Exit Velocity: 2.8 ft./min.
14. Water Vapor Content: System designed for zero vapor content.
15. Process controlled by collection system: Transfer of dried sludge from a dryer to a product storage silo.

16. Material Handling Rate: 0.76 tons/hr., max.
17. Operation Schedule: 8760 hrs./yr.

3C - STARTUP AND SHUTDOWN PROCEDURES

4.5.4 VALVE TAG SCHEDULE

Please refer to Appendix B.

4.5.5 THEORY OF OPERATION

Through the use of conveyors and inlet valves to the silos, product is evenly distributed for storage.

4.5.6 MODES OF OPERATION

The silo loading operation is a continuous process. The operator selects which of the two storage silos will be in use. Each silo has two inlet valves. By cycling the inlet valves (open and closed) with adjustable times, equal distribution of material in the silo is ensured.

4.5.7 START-UP AND SHUTDOWN PROCEDURES

Please refer to Section 4.2.7 as this system operates in conjunction with the pelletizer train.

4.5.8 ROUTINE OPERATING CHECKLIST

The following items need to be checked on a routine basis:

1. Check the conveyor motors for heat, noise, or excessive vibration.
2. Check conveyor motor drives for wear or excessive vibration.
3. Check the tracking of the conveyors; look for any alignment problems that may need correcting.
4. Check the conveyor discharge for any plugging or blockage.

4.5.9 PROCESS CONTROL PARAMETERS

The main process control parameter is the selection of silo for filling that has sufficient room for the amount of product being transported.

3D – OPERATION AND MAINTENANCE PLAN

b. The following observations, checks, and operations apply to each silo and shall be conducted on the following schedule as specified:

Daily

1. Observe stack (visual).
2. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
3. Note any unusual occurrence in the process being ventilated.
4. Observe all indicators on control panel.

Weekly

1. Inspect conveyor and air lock bearing for lubrication.

Monthly

1. Check cleaning mechanism moving parts.
2. Inspect fans for corrosion and material build-up.
3. Check all drive belts and chains for wear and tensions.
4. Check all hoses and clamps.
5. Inspect housing for corrosion.

Quarterly

1. Check shaker motor ampere reading.
2. Inspect fan wheel.
3. Thoroughly inspect filter cartridges.
4. Check gaskets on all doors.
5. Inspect paint.

Semi-Annually

1. Lubricate baghouse explosion vent latches.
2. Inspect vacuum vent diaphragms.
3. Inspect vacuum vent guides.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Change filter cartridges.

c. Process parameters for truck loading:

1. Source Designator: Loading trucks with dried sludge from 1 of 2 storage silos.
2. Baghouse Manufacturer: Sternvent Company, Inc.
3. Model Name: CCPS0258 Hopper Style
4. Design Flow Rate: 1000 dscfm
5. Efficiency Rating at Design Capacity: 99%
6. Pressure Drop: 2" - 6" WG
7. Air to Cloth Ratio: 4.24
8. Bag Material: Polyester felt
9. Bag Cleaning Conditions: Jet air pulse, 80-100 psig
10. Gas Temperature: Ambient
11. Stack Height Above Ground: 45 ft.
12. Exit Dimension: 72.5 sq. inches
13. Exit Velocity: 13.8 fpm (design)
14. Water Vapor Content: Ambient
15. Process controlled by collection system: Transfer of dried sludge from 1 of 2 sludge storage silos to a truck.
16. Material Handling Rate: 25.8 tons/hr., max.
17. Operation Schedule: 8760 hrs./yr.

D. The following observations, checks, and operations apply to the sludge truck loading operation and shall be conducted on the following schedule as specified:

Daily during loading

1. Observe stack (visual).
2. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
3. Note any unusual occurrence in the process being ventilated.
4. Observe all indicators on control panel.
5. Assure that dust is being removed from system.
6. Check reverse air pressure.

Weekly

1. Inspect conveyor and air lock bearing for lubrication.

Quarterly

1. Check all hoses and clamps.
2. Inspect housing for corrosion.
3. Check bag cleaning sequence to see that all valves are opening and closing properly.
4. Check compressed air lines, including line oilers and filters.
5. Inspect fan.
6. Grease fan bearings.
7. Grease fan shaft seal.
8. Check fan belts.
9. Tighten lag bolts.
10. Inspect electrical control panels.
11. Check fan motor ampere reading.
12. Thoroughly inspect bags.
13. Check gaskets on all doors.

Annually

1. Check paint.
2. Check welds.
3. Change filter-tubes.

e. A list of the type and quantity of required spare parts for the pollution control devices which are stored on the premises.

f. A record log which will indicate, at a minimum:

1. When maintenance was performed.
2. What maintenance was performed.
3. Who performed the maintenance.

g. Records of inspections, maintenance, and performance parameters shall be retained and shall be made available to the Department or the PCDEM upon request.

[Rule 62-213.440(1), F.A.C.]:

Daily

1. Walk through system listening for proper operation (audible leaks, proper fan and pump functions, etc.).
2. Note any unusual occurrence.
3. Check for fluid leaks.
4. Check liquid flow rate (gpm) and CL_2 ppm.
5. Record ORP and pH.

Weekly

1. Grease fan bearings.

Monthly

1. Fan /Pump rotation.
2. Check fan belts.
3. Change tower H_2O.
4. Exercise recirculating pump.
5. Check electronic control panels.
6. Check ampere readings for fans and pumps.
7. Verify spray bar operation.

Quarterly

1. Tighten lag bolts.
2. Check all welds.

Yearly

1. Grease motor bearings.
2. Inspect ductwork.
3. Inspect fans.

c. A list of the type and quantity of required spare parts for the pollution control devices which are stored on the premises.

d. A record log which will indicate, at a minimum:

1. When maintenance was performed.
2. What maintenance was performed.
3. Who performed the maintenance.

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 3E
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☒ Not Applicable

3E - APPLICABLE REQUIREMENTS

APPLICABLE REQUIREMENTS

See Document E

EMISSION UNIT ID NO. 006 – TRUCK LOADING AREA

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Truck loading area for dried pelletized sludge

3. Emissions Unit Identification Number: 001

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			49	[ ] Yes [X] No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Particulate is controlled by a Sternvent Model CCPS0258 baghouse.

2. Control Device or Method Code(s): 001

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 25.8 TPH	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: hours/day weeks/year	days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 45 feet	7. Exit Diameter: 0.8 feet
8. Exit Temperature: 77 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: 3 % (ambient)
11. Maximum Dry Standard Flow Rate: 1,000 dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

4. Segment Description (Process/Fuel Type): Truck loading of pelletizied sludge		
2. Source Classification Code (SCC): 3-05-006-12	3. SCC Units: tons processed	
4. Maximum Hourly Rate: 25.8	5. Maximum Annual Rate: 224,256	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: SCC code for cement raw material transfer		

Segment Description and Rate: Segment __ of __

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment _____ of

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**001**		**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99%
3. Potential Emissions: 0.26 lb/hour 1.14 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.03 gr/dscf Reference: Rule 62-296.700,F.A.C.	7. Emissions Method Code: 0
8. Calculation of Emissions: 0.03 gr/dscf 1,000 dscfm x 60 min/hr x lbs/7,000 gr = 0.26 lb/hr 0.26 lb/hr x 8,760 hrs/yr x ton/2,000 lbs = 1.14 tons	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.03 gr/dscf	4. Equivalent Allowable Emissions: 0.26 lb/hour 1.14 tons/year
5. Method of Compliance: EPA Method 9	
6. Allowable Emissions Comment (Description of Operating Method): Testing by EPA Method 9 per Rule 62-296.711(3)(c),F.A.C.	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE5	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA METHOD 9	
5. Visible Emissions Comment: Rule 62-296.711(3)(c),F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _____ of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 4A [ ] Previously Submitted, Date

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 4B [ ] Previously Submitted, Date

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 4C [ ] Previously Submitted, Date
   [ ] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: 4D [ ] Previously Submitted, Date
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID:
   Test Date(s)/Pollutant(s) Tested:

   [X] Previously Submitted, Date:
   Test Date(s)/Pollutant(s) Tested: 7/15/03

   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested:
   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

EMISSIONS UNIT INFORMATION
Section [4] of [4]

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☒ Attached, Document ID: 4E
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☒ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
5. Acid Rain Part Application
   - ☐ Certificate of Representation (EPA Form No. 7610-1)
     - ☐ Copy Attached, Document ID:
   - ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
     - ☐ Attached, Document ID:
     - ☐ Previously Submitted, Date:
   - ☒ Not Applicable

Additional Requirements Comment

4A - PROCESS FLOW DIAGRAM

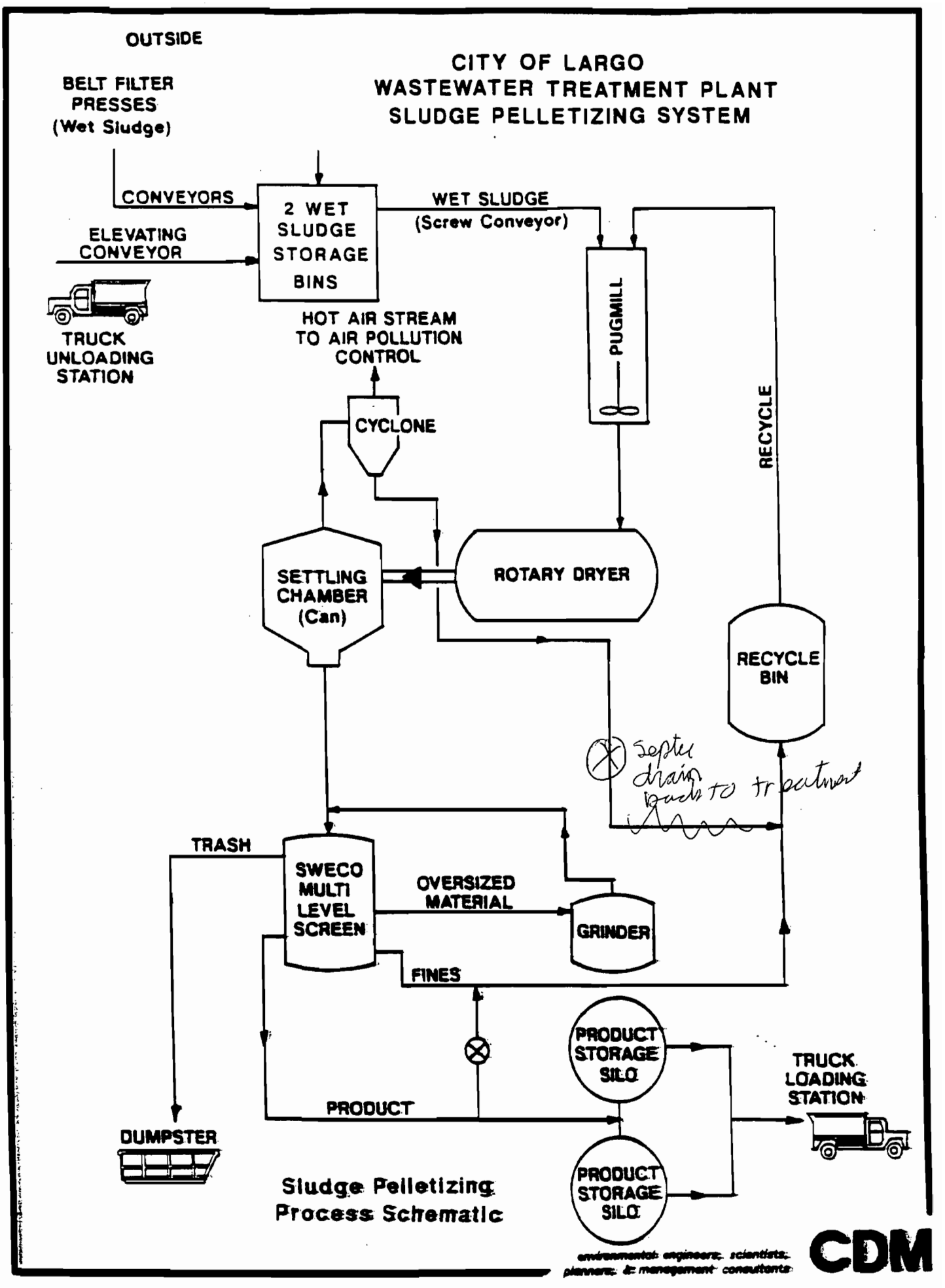

OUTSIDE
CITY OF LARGO
WASTEWATER TREATMENT PLANT
SLUDGE PELLETIZING SYSTEM
BELT FILTER PRESSES (Wet Sludge)
CONVEYORS
ELEVATING CONVEYOR
2 WET SLUDGE STORAGE BINS
WET SLUDGE (Screw Conveyor)
PUGMILL
RECYCLE
TRUCK UNLOADING STATION
HOT AIR STREAM TO AIR POLLUTION CONTROL
CYCLONE
SETTLING CHAMBER (Can)
ROTARY DRYER
RECYCLE BIN
septic drain back to treatment
TRASH
SWECO MULTI LEVEL SCREEN
OVERSIZED MATERIAL
GRINDER
FINES
PRODUCT STORAGE SILO
TRUCK LOADING STATION
PRODUCT
DUMPSTER
PRODUCT STORAGE SILO
Sludge Pelletizing Process Schematic
environmental engineers, scientists, planners, & management consultants
CDM

FIGURE 4-1

4B - CONTROL EQUIPMENT DESCRIPTION

c. Process parameters for truck loading:

1. Source Designator: Loading trucks with dried sludge from 1 of 2 storage silos.
2. Baghouse Manufacturer: Sternvent Company, Inc.
3. Model Name: CCPS0258 Hopper Style
4. Design Flow Rate: 1000 dscfm
5. Efficiency Rating at Design Capacity: 99%
6. Pressure Drop: 2" - 6" WG
7. Air to Cloth Ratio: 4.24
8. Bag Material: Polyester felt
9. Bag Cleaning Conditions: Jet air pulse, 80-100 psig
10. Gas Temperature: Ambient
11. Stack Height Above Ground: 45 ft.
12. Exit Dimension: 72.5 sq. inches
13. Exit Velocity: 13.8 fpm (design)
14. Water Vapor Content: Ambient
15. Process controlled by collection system: Transfer of dried sludge from 1 of 2 sludge storage silos to a truck.
16. Material Handling Rate: 25.8 tons/hr., max.
17. Operation Schedule: 8760 hrs./yr.

D. The following observations, checks, and operations apply to the sludge truck loading operation and shall be conducted on the following schedule as specified:

Daily during loading

1. Observe stack (visual).
2. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
3. Note any unusual occurrence in the process being ventilated.
4. Observe all indicators on control panel.
5. Assure that dust is being removed from system.
6. Check reverse air pressure.

Weekly

1. Inspect conveyor and air lock bearing for lubrication.

4C - STARTUP AND SHUTDOWN PROCEDURES

screw conveyor directly into truck at the truck loading station. A truck scale is provided at the loading point for measurement of the product.

The scale is a 100-ton capacity, nominal 70 ft x 10 ft, pure electronic load cell motor truck scale. The scale is a shallow pit, low profile type scale.

The truck loading station has a retractable bulk loading spout to load the heat-dried sludge product into open top transport vehicles at design loading rates and reduce or eliminate dust associated with the operation. The spouts accept the dry product through a top flanged inlet and discharge into the truck from a bottom spout. The retractable spout vertical travel is 10 feet. It is provided with a reversible electric motor to extend or extract the lower spout discharge.

The spout dust outlet is flanged, connected to the dust collection vacuum equipment and operates under a negative pressure. Dust and displaced air are withdrawn through the spout and flanged outlet.

The retractable spout is provided with an automatic raising/level sensing kit that allows the loadout operator to select the sensing probe mode (i.e., to sense the level of product in the vehicle as it becomes full, or when the automatic raising mode is selected, the spout retracting drive will automatically retract the spout as the product contacts the probe).

4.7.6 MODES OF OPERATION

Start-up and shutdown for the truck loading station is initiated locally by the operator.

4.7.7 START-UP AND SHUTDOWN PROCEDURES

Start-up

1. Place all local controls in the OFF position.
2. Place the local disconnects in the ON position.
3. Place all associated MCC breakers in the ON position.

4. Place the conveyor's (associated with the silo to be unloaded) HAND/OFF selector in the HAND position.
5. Place the truck loading dust collector HAND/OFF/AUTO selector switch in the AUTO position.
6. Place the spout AUTO Raise/Level sense selector in the desired position.
7. Place the silo outlet valve Open/Close selector in the OPEN position.

Shutdown

1. Place silo outlet valve OPEN/CLOSE selector in Close.
2. Place the conveyor HAND/OFF selector(s) in the OFF position once clear of product.
3. Place spout AUTO Raise/Level sense selection in desired position.
4. Place the truck loading dust collector HAND/OFF/AUTO selector switch in the OFF position.

4.7.8 ROUTINE OPERATING CHECKLIST

The following items needs to be checked on a routine basis:

1. Check the conveyer motors for heat, noise, or excessive vibration.
2. Check conveyor motor drives for wear or excessive vibration.
3. Check the tracking of the conveyors; look for any alignment problems that may need correcting.
4. Check the conveyor discharge for any plugging or blockage.

4.7.9 PROCESS CONTROL PARAMETERS

The process control parameter is to ensure that the truck does not get overloaded with product.

4D – OPERATION AND MAINTENANCE PLAN

c. Process parameters for truck loading:

1. Source Designator: Loading trucks with dried sludge from 1 of 2 storage silos.
2. Baghouse Manufacturer: Sternvent Company, Inc.
3. Model Name: CCPS0258 Hopper Style
4. Design Flow Rate: 1000 dscfm
5. Efficiency Rating at Design Capacity: 99%
6. Pressure Drop: 2" - 6" WG
7. Air to Cloth Ratio: 4.24
8. Bag Material: Polyester felt
9. Bag Cleaning Conditions: Jet air pulse, 80-100 psig
10. Gas Temperature: Ambient
11. Stack Height Above Ground: 45 ft.
12. Exit Dimension: 72.5 sq. inches
13. Exit Velocity: 13.8 fpm (design)
14. Water Vapor Content: Ambient
15. Process controlled by collection system: Transfer of dried sludge from 1 of 2 sludge storage silos to a truck.
16. Material Handling Rate: 25.8 tons/hr., max.
17. Operation Schedule: 8760 hrs./yr.

D. The following observations, checks, and operations apply to the sludge truck loading operation and shall be conducted on the following schedule as specified:

Daily during loading

1. Observe stack (visual).
2. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
3. Note any unusual occurrence in the process being ventilated.
4. Observe all indicators on control panel.
5. Assure that dust is being removed from system.
6. Check reverse air pressure.

Weekly

1. Inspect conveyor and air lock bearing for lubrication.

Quarterly

1. Check all hoses and clamps.
2. Inspect housing for corrosion.
3. Check bag cleaning sequence to see that all valves are opening and closing properly.
4. Check compressed air lines, including line oilers and filters.
5. Inspect fan.
6. Grease fan bearings.
7. Grease fan shaft seal.
8. Check fan belts.
9. Tighten lag bolts.
10. Inspect electrical control panels.
11. Check fan motor ampere reading.
12. Thoroughly inspect bags.
13. Check gaskets on all doors.

Annually

1. Check paint.
2. Check welds.
3. Change filter-tubes.

e. A list of the type and quantity of required spare parts for the pollution control devices which are stored on the premises.

f. A record log which will indicate, at a minimum:

1. When maintenance was performed.
2. What maintenance was performed.
3. Who performed the maintenance.

g. Records of inspections, maintenance, and performance parameters shall be retained and shall be made available to the Department or the PCDEM upon request.

[Rule 62-213.440(1), F.A.C.]:

4E - APPLICABLE REQUIREMENTS

APPLICABLE REQUIREMENTS

See Document E