Facility Name: **RMI Titanium Co -Extrusion Plant**
Application Number: **02-2025**
Date: **November 4, 1998**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as

an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements

AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **RMI Titanium Co -Extrusion Plant** located in **Ashtabula** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

Ohio EPA Source Number	
F001	F003
F001 Cont'd	F003 Cont'd
F002	
F002 Cont'd	

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				P016 Cont'd
F003 Cont'd				
	F003 Cont'd		P016	
		F003 Cont'd		

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
Source Identification Description				
Soils storage piles		Unpaved roadways	Soil washing and crushing operations:	
			Feed soil load into apron feed hopper and two outdoor transfer points	Indoor sizing process - including load into drum scrubber from conveyor, rotating drum scrubber/ trommel screen and wet screen
	Paved and unpaved roadways:			
	Paved roadways			
			Outdoor feed soil handling - 2 transfer points and 2 conveyors	

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Indoor rock/soil handling - conveyor for rock/soil loading, crushed stone conveyor, a rock crusher and transfers into and out of the unit by conveyor	Feed operations for reactor system, belt filter press and the wastewater treatment system	All egress points Wastewater evaporator system		

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
		BAT Determination		
			See Additional Special Terms and Conditions A.7., A.9. and A.11.	
		See Additional Special Terms and Conditions A.1. and A.3.		
		See Additional Special Terms and Conditions A.6., A.10. and A.11.		

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
See Additional Special Terms and Conditions A.13.	See Additional Special Terms and Conditions A.13. and A.16.	See Additional Special Terms and Conditions A.13.	See Additional Special Terms and Conditions A.13.	See Additional Special Terms and Conditions A.17.

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
			3745-31-05	3745-31-05
Applicable Federal & OAC Rules	3745-31-05	3745-17-07 (B)(5)	3745-17-07 (B)(1)	
3745-17-07 (B)(6)	3745-31-05	3745-31-05		3745-07-07 (B)(1)
3745-31-05				
			3745-31-05	
		3745-17-08 (B)(B)(2)		
	3745-17-07 (B)(4)	3745-31-05		3745-31-05
	3745-31-05		3745-17-07 (B)(1)	
3745-17-08 (B),(B)(6)			3745-31-05	3745-17-08 (B)
				3745-31-05
3745-31-05	3745-17-08 (B), (B)(8), (B)(9)	3745-31-05		
	3745-31-05		3745-17-08 (B)	

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
		3745-31-05	3745-31-05	
3745-17-07 (B)(1)				Permit Allowable Mass Emissions and/or Control/Usage Requirements *
	3745-17-07 (B)(1)	3745-31-05		No visible particulate emissions except for 1 minute in any hour during load-in and load-out operations; and no visible particulate emissions except for 1 minute in any hour from wind erosion.
3745-31-05	3745-31-05			
		3745-17-07 (B)(1)		
		3745-31-05		*
3745-17-08 (B), (B)(3) 3745-31-05	3745-17-08 (B)	3745-17-08 (B)		Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
employed.	except for 1 minute during any 60-minute	*		
PM emissions from all egress points shall be limited to 4.28 TPY.	period from the paved roadways.	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed.	Visible particulate emissions shall not exceed 10 percent opacity as a 3 minute average.	No visible particulate emissions shall be permitted from the indoor sizing process
	*			*
	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed.	PM emissions from all egress points shall be limited to 12.64 TPY.	*	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed.
Emissions of radionuclides shall be limited to 1.30 x 10^{-4} Ci/yr.		Emissions of radionuclides shall be limited to 1.48 x 10^{-4} Ci/yr.	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed.	*
	*	*	*	
*	No visible particulate emissions except for 3 minutes during any 60-minute period from the unpaved roadways.			
No visible particulate emissions		Visible particulate emissions shall not exceed 10 percent opacity as a 3 minute average.		No visible

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
particulate emissions shall be permitted from the rock/soil handling operations nor the rock crusher.	fugitive dust shall be employed.	minimize or eliminate visible emissions of fugitive dust shall be employed.		
	*	PM emissions shall be limited to 0.46 TPY.		
		Emissions of radionuclides shall be limited to 2.14 x 10^{-4} Ci/yr.		
	No visible particulate emissions shall be permitted from the feed operations at the reactor system, the belt filter press, nor the wastewater treatment system.	*		
		No visible particulate emissions shall be permitted from the wastewater evaporator system.		
		*		
Best available control measures that are sufficient to minimize or eliminate visible emissions of		Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed.		
	Best available control measures that are sufficient to			

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* The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PM	17.37
Radionuclides	2.99×10^{-4} Ci/yr

RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise

indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Northeast District Office, 2110 E. Aurora Road, Twinsburg, OH 44087.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and

federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA, Northeast District Office, 2110 E. Aurora Road, Twinsburg, OH 44087.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

NINETY DAY OPERATING PERIOD

The facility will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms

and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

Introduction

The facility is a former metals extrusion plant and now is a facility where various remediation projects occur. The permittee maintains a current NRC License which applies the requirements of 10 CFR 20 to all operations conducted at the facility. This permit is for a new Soil Washing Project to decontaminate radionuclide contamination in affected soils. The Soils Storage Piles (F001) include: feed soil, treated soil, projected soil and existing soil. Other emissions units are the Paved and Unpaved Roadways (F002), the Soil Washing & Crushing Operations (F003) and the Wastewater Evaporator System (P016).

A. Operational Restrictions

(F001) Soils Storage Piles

1. The permittee shall employ best available control measures on all load-in and load-out operations associated with the soil storage piles for the purpose of ensuring compliance with the applicable requirements. The permittee shall employ the control measures listed below to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

    a. A conveyor/stacker shall be employed for load-in of treated soil.

    b. The material drop height distance shall be minimized at all load-in and load-out operations.

2. The above-mentioned control measure(s) shall be employed if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

3. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the applicable requirements. The permittee shall employ the control measures listed below to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

a. All bare soil storage piles shall be treated with water at sufficient treatment frequencies.

b. All covered soil storage piles, shall remain covered with tarps except during load-out operations.

c. The working face of seeded soil storage piles shall be treated with water at sufficient treatment frequencies.

4. The above-mentioned control measure(s) shall be employed for wind erosion from each specified pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

5. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

(F002) Paved and Unpaved Roadways

6. The permittee shall employ best available control measures on all paved roadways for the purpose of ensuring compliance with the applicable requirements. The permittee shall treat the paved roadways by watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

7. The permittee shall employ best available control measures on all unpaved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee shall treat the unpaved roadways with watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

8. The use of used oil as a dust suppressant is prohibited per OAC rule 3745-279-12(B).

9. The permittee shall certify or possess certification that all waste material used to control fugitive dust meets the PCB limitations set forth in 40 CFR 761, and that there are no listed hazardous wastes or characteristic hazardous wastes as set forth in 40 CFR 261.

10. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

11. Any unpaved roadway, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway that takes the characteristics of a paved roadway due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways. Any unpaved roadway that is paved shall be subject to the visible emission limitation for paved roadways.

12. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

13. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

14. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

(F003) Soil Washing & Crushing Operations

15. The permittee shall employ best available control measures for the operation(s) identified below for the purpose of ensuring compliance with the applicable requirements. The permittee shall perform the following control measure(s) to ensure compliance:

operation(s)	control measure(s)
feed soil load-in to the apron feed hopper	material drop height distance shall be minimized
indoor sizing process	use of recycled leachate or a water spray system
rock crusher and transfers into and out of the unit	use of a dust capture & control system
feed operations at the slurry reactor system, belt filter press and wastewater treatment system**s**	use of enclosed mechanical feed systems

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

16. For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of any of the operation(s) until further observation confirms that use of the control measure(s) is unnecessary.

17. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

18. The pressure drop across the pulse jet baghouse for the rock crusher and two associated transfer points shall be maintained within the range of 1-10 inches of water while the emissions unit is in operation.

(P016) Wastewater Evaporator System

19. The temperature of the exhaust gases from the condenser(s), shall not be greater than 200 degrees Fahrenheit, according to manufacturer specifications.

B. Monitoring and/or Recordkeeping Requirements

(F001) Soils Storage Piles

1. Except as otherwise provided in this section, the permittee shall perform inspections of load-in operation(s) at the soil piles in accordance with the following frequencies:

storage pile(s) identification	minimum load-in inspection frequency
all soil piles	daily

2. Except as otherwise provided in this section, the permittee shall perform inspections of load-out operation(s) at the soil piles in accordance with the following frequencies:

storage pile(s) identification	minimum load-out inspection frequency
all soil piles	daily

3. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from soil pile surfaces associated with each type of soil pile in accordance with the following frequencies:

storage pile(s) identification	minimum wind erosion inspection frequency
feed soil piles	daily
treated soil piles	every other day
bare soil storage piles	daily
tarped soil storage piles	weekly
seeded soil storage piles	weekly

4. No inspection shall be necessary for wind erosion from the surface of a soil pile when the pile is covered with snow and/or ice; or for any soil pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

5. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of the soil piles, and wind erosion from the surface of the soil piles. The inspections shall be performed during representative, normal storage pile operating conditions.

6. The permittee may upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

7. The permittee shall maintain records of the following information:

a. the storage pile(s) identification;

b. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice

cover or precipitation;

c. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

d. the dates the control measures were implemented; and,

e. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in 7.e. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

(F002) Paved and Unpaved Roadways

8. Except as otherwise provided in this section, the permittee shall perform inspections of the roadways in accordance with the following frequencies:

roadway surface type	minimum inspection frequency
paved	daily
unpaved	daily

9. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed, during representative, normal traffic conditions. No inspection shall be necessary for a roadway that is covered with snow and/or ice; or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

10. The permittee may upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

11. The permittee shall maintain records of the following information:

a. the road surface type;

b. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

c. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

d. the dates the control measures were implemented; and,

e. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 11.e. shall be kept separately for (i) the paved roadways and (ii) the unpaved roadways, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

(F003) Soil Washing & Crushing Operations

12. Except as otherwise provided in this section, for operations that are not enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

operation(s)	minimum inspection frequency
Outdoor Feed Soil Handling: 2 transfer points & 2 conveyors	daily
Sizing Process: load into drum scrubber from conveyor	weekly

13. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations,

instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a weekly basis.

14. The above-mentioned inspections shall be performed during representative, normal operating conditions.

15. The permittee may upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be

sufficient to ensure compliance with the above-mentioned applicable requirements.

16. The permittee shall maintain records of the following information:

a. the operation(s) identification;

b. the date and reason any required inspection was not performed;

c. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);

d. the dates the control measure(s) was implemented; and,

e. on a calendar quarter basis, the total number of days the control measure(s) was implemented.

The information in B.16.e. shall be kept separately for each operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

(P016) Wastewater Evaporator System

17. The permittee shall make temperature measurements of the exhaust gases from the condenser(s) with a measurement instrument twice per day when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for the instrument shall be guaranteed by the manufacturer to be within plus or minus 1 percent of the temperature being measured or plus or minus 5 degrees Fahrenheit, whichever is greater. The measurement instrument shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information twice each day:

a. the measured temperature of the exhaust gases from the

condenser(s) and the time the measurement(s) are taken; and,

b. a log or record of operating time for the capture (collection) system, control device, and the associated emissions unit.

18. The permittee shall collect and record the following information each month:

A calibration record for the measurement instrument.

C. Reporting Requirements

(F001) Soils Storage Piles;
(F002) Paved and Unpaved Roadways; and,
(F003) Soil Washing & Crushing Operations

1. The permittee shall submit deviation reports that identify any of the following occurrences at each of the above named emissions unit(s):

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and,

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

2. The deviation reports shall include probable cause of such deviations and any corrective actions or preventative measures taken, and shall be included in the quarterly reports and submitted to the Ohio EPA Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

(F003) Soil Washing & Crushing Operations (only)

3. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in term B.16.

4. The deviation reports shall include probable cause of such deviations and any corrective actions or preventative measures taken, and shall be included in the quarterly reports and submitted to the Ohio EPA Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

(P016) Wastewater Evaporator System

5. The permittee shall submit temperature deviation (excursion) reports that identify any time during which the measured temperature of the exhaust gases from the condenser(s) exceeded the temperature limitation specified in term A.17.

6. The deviation reports shall include probable cause of such deviations and any corrective actions or preventative measures taken, and shall be included in the quarterly reports and submitted to the Ohio EPA Northeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

D. Testing Requirements

(F001) Soils Storage Piles

1. Compliance with the emissions limitation(s) in the air Emission Summary of this permit shall be determined in accordance with the following methods(s):

   a. Emission Limitation(s)

   No visible particulate emissions except for one minute in any hour during load-in and load-out operations; and no visible particulate emissions except for one minute in any hour from wind erosion.

   Applicable Compliance Method

   Compliance with the visible emission limitations for the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

   b. Emission Limitation(s)

   4.28 TPY PM

Applicable Compliance Method

To determine the actual worst case emission rate for particulate matter the permittee shall employ the following:

i. determination of annual PM emissions from load-in operations, E (load-in) in ton PM/yr:

E (load-in)
= $\{H \times D \times W_{LOAD\text{-}IN} \times F_{LOAD\text{-}IN} \times (1 - C/100)\}/2000$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{LOAD\text{-}IN}$ = maximum load-in process weight, tons/hr.

$F_{LOAD\text{-}IN}$ = emission factor, lb PM/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42.

C = control efficiency; see references in section 13.2.4 of AP-42.

ii. determination of annual PM emissions from load-out operations, E (load-out) in ton PM/yr:

E (load-out)
= $\{H \times D \times W_{LOAD\text{-}OUT} \times F_{LOAD\text{-}OUT} \times (1 - C/100)\}/2000$

$W_{LOAD\text{-}OUT}$ = maximum load-out process weight, tons/hr.

$F_{LOAD\text{-}OUT}$ = emission factor, lb PM/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42.

iii. determination of annual PM emissions from wind erosion, E (wind) in ton PM/yr:

E (wind)
= $\{A \times N \times F_{WIND} \times (1 - C/100)\}/(454 \times 2000)$
A = pile surface area, m^2.

N = number of piles.

F_{WIND} = emission factor, 378 gram PM/(m^2 x yr), as discussed in section 1.2 of NRC Guide 3.59.

C = control efficiency, see page 30 of NRC Guide 3.59.

iv. determination of total annual PM emissions, E(total) in ton/yr:

E(total) = E (load-in) + E (load-out) + E (wind)

c. Emission Limitation(s)

1.30 x 10^{-4} Ci/yr of radionuclides

Applicable Compliance Method

To determine the actual worst case emission rate for radionuclides the permittee shall employ the following:

i. determination of annual radionuclide emissions from load-in operations, E (load-in) in Ci/yr:

E (load-in)
= H x D x $W_{LOAD-IN}$ x $F_{LOAD-IN}$ x U x (1 - C/100) x (1 x 10^{-12} Ci/pCi) x 454 g/lb

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{LOAD-IN}$ = maximum load-in process weight, tons/hr.

$F_{LOAD-IN}$ = emission factor, lb PM_{10}(radionuclides)/ton $soil_{LOAD-IN}$, as noted in section 13.2.4 of AP-42.

U = maximum uranium concentration: 30 pCi/g for treated soil as allowed by NRC; 150 pCi/g for contaminated soil per on-site soil survey(s).

C = control efficiency; see references in section 13.2.4 of AP-42.

ii. determination of annual radionuclide emissions from load-out operations, E (load-out) in Ci/yr:

$$E_{(load\text{-}out)} = H \times D \times W_{LOAD\text{-}OUT} \times F_{LOAD\text{-}OUT} \times U \times (1 - C/100) \times (1 \times 10^{-12}\ Ci/pCi) \times 454\ g/lb$$

$W_{LOAD-OUT}$ = maximum load-out process weight, tons/hr.

$F_{LOAD-OUT}$ = emission factor, lb PM_{10}(radionuclides)/ton $soil_{LOAD-IN}$, as noted in section 13.2.4 of AP-42.

iii. determination of annual radionuclide emissions from wind erosion, E (wind) in Ci/yr:

E (wind) = $A \times N \times F_{WIND} \times U \times (1 - C/100) \times (1 \times 10^{-12}$ Ci/pCi)

A = pile surface area, m^2.

N = number of piles.

F_{WIND} = emission factor, 189 gram PM_{10} (radionuclides)/(m^2 x yr), assuming PM_{10} is 50 percent of total PM per section 13.2.5-3 of AP-42, and as discussed in section 1.2 of NRC Guide 3.59.

iv. determination of total annual radionuclide emissions, E(total) in Ci/yr:

E(total) = E (load-in) + E (load-out) + E (wind)

(F002) Paved and Unpaved Roadways

2. Compliance with the emissions limitation(s) in the air Emission Summary of this permit shall be determined in accordance with the following methods(s):

a. Emission Limitation(s)

No visible particulate emissions except for one minute during any 60-minute period from the paved roadways; and no visible particulate emissions except for 3 minutes during any 60-minute period from the unpaved roadways.

Applicable Compliance Method

Compliance with the visible emission limitations for the paved and unpaved roadways identified above shall be determined in accordance with Test Method 22 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

b. Emission Limitation(s)

12.64 TPY PM

Applicable Compliance Method

To determine the actual worst case emission rate for particulate matter the permittee shall employ the following:

i. determination of annual PM emissions from paved roadways, E (paved) in ton PM/yr:

$$E\,(paved) = [k \times \{(s/2)^{0.65} \times (W/3)^{1.5}\} \times N \times L \times (1-C/100) \times D]/2000$$

k = particle size multiplier, 0.082 lb PM/vehicle mile traveled for paved roadways per section 13.2.1 of AP-42.

s = silt loading, 3 g/m^2, for worst case low ADT paved roads per Table 13.2.1-2 of AP-42.

W = average vehicle weight, tons.

N = number of vehicle passes/(day x segment).

L = road segment length, miles.

C = control efficiency per Table 2.1.1-3 on p. 2-16 of Reasonably Available Control Measures for Fugitive Dust Sources, Ohio EPA, Sept., 1980.

D = maximum operating days, 365 days/yr.

ii. determination of annual PM emissions from unpaved roadways, E (unpaved) in ton PM/yr:

E (unpaved)
= [k x 5.9 x (s/12) x (S/30) x $(W/3)^{0.7}$ x $(w/4)^{0.5}$ x {(365-p)/365} x N x L x (1-C/100) x D]/2000

k = particle size multiplier, 0.80 lb PM/vehicle mile traveled for unpaved roadways per section 13.2.2 of AP-42.

s = silt content, 5 percent for rural gravel, crushed limestone for gravel roadway segments and 12 percent for rural, dirt roads for dirt roadway segments per Table 13.2.2-1 of AP-42.

S = average vehicle speed, miles/hr.

w = number of wheels.

p = number of days with $\geq$ 0.01 in. precipitation/yr.

iii. determination of total annual PM emissions, E(total) in ton/yr:

E(total) = E (paved) + E (unpaved)

c. Emission Limitation(s)

1.48 x 10^{-4} Ci/yr of radionuclides

Applicable Compliance Method

To determine the actual worst case emission rate for radionuclides the permittee shall employ the following:

i. determination of annual radionuclide emissions from paved roadways, E (paved) in Ci/yr:

E (paved)

= $k \times (s/2)^{0.65} \times (W/3)^{1.5}\} \times N \times L \times (1-C/100) \times D \times U \times (1 \times 10^{-12}$ Ci/pCi) x 454 g/lb

k = particle size multiplier, 0.016 lb PM_{10} (radionuclides)/vehicle mile traveled for paved roadways per section 13.2.1 of AP-42.

U = maximum uranium concentration: 30 pCi/g for treated soil as allowed by NRC; 150 pCi/g for contaminated soil per on-site soil survey(s).

ii. determination of annual radionuclide emissions from unpaved roadways, E (unpaved) in Ci/yr:

E (unpaved)
= $k \times 5.9 \times (s/12) \times (S/30) \times (W/3)^{0.7} \times (w/4)^{0.5} \times \{(365-p)/365\} \times N \times L \times (1-C/100) \times D \times U \times (1 \times 10^{-12}$ Ci/pCi) x 454 g/lb

k = particle size multiplier, 0.36 lb PM_{10} (radionuclides)/vehicle mile traveled for unpaved roadways per section 13.2.2 of AP-42.

(F003) Soil Washing & Crushing Operations

3. Compliance with the emissions limitation(s) in the Air Emission Summary of this permit shall be determined in accordance with the following methods(s):

a. Emission Limitation(s)

Visible particulate emissions shall not exceed 10 percent as a 3 minute average from the outdoor feed soil handling operation.

Applicable Compliance Method

Compliance with the visible emission limitations for the operation identified above shall be determined in accordance with Test Method 9 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

b. Emission Limitation(s)

No visible particulate emissions from any of the following operations: indoor sizing process; feed operations at the reactor system, the belt filter press, or the wastewater treatment system.

Applicable Compliance Method

Compliance with the visible emission limitations for the operations identified above shall be determined in accordance with Test Method 22 as set forth in Appendix A on Test Methods in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

c. Emission Limitation(s)

0.46 TPY PM

Applicable Compliance Method

To determine the actual worst case emission rate for particulate matter the permittee shall employ the following:

i. determination of annual PM emissions from the feed soil load into the apron feed hopper, E (apron feed hopper) in ton PM/yr:

$$E\ (\text{apron feed hopper}) = \{H \times D \times W_{FEED\ SOIL} \times F_{FEED\ SOIL} \times (1 - C/100)\}/2000$$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{FEED\ SOIL}$ = maximum load-in process weight, in tons/hr, for the apron feed hopper load-in operation.

$F_{FEED\ SOIL}$ = emission factor, lb PM/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42, for the apron feed hopper load-in operation.

C = control efficiency; see references in section 13.2.4 of AP-42.

ii. determination of annual PM emissions from the outdoor feed soil handling operations, E (feed soil) in ton PM/yr:

$$E\ (\text{feed soil}) = \{H \times D \times W_{FEED\ SOIL} \times F_{FEED\ SOIL} \times (1 - C/100)\}/2000$$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{FEED\ SOIL}$ = maximum load-in process weight, in tons/hr, for the feed soil load-in operation.

$F_{FEED\ SOIL}$ = emission factor, lb PM/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42, for the feed soil load-in operation.

C = control efficiency; see references in section 13.2.4 of AP-42.

iii. determination of annual PM emissions from the enclosed transfers into and out of the rock crusher, E (rock/soil) in ton PM/yr:

$$E\ (rock/soil) = \{H \times D \times W_{ROCK/SOIL} \times F_{ROCK/SOIL} \times (1 - C/100)\}/2000$$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{ROCK/SOIL}$ = maximum load-in process weight, in tons/hr, for the rock/soil load-in operation.

$F_{ROCK/SOIL}$ = emission factor, lb PM/ton $soil_{LOAD-IN}$, as noted in section 13.2.4 of AP-42, for the rock/soil load-in operation.

C = control efficiency of dust control device, according to manufacturer's specifications.

iv. determination of annual PM emissions from rock crusher operation, E (crusher) in ton PM/yr:

$$E\ (crusher) = \{H \times D \times W_{CRUSHER} \times F_{CRUSHER} \times (1 - C/100)\}/2000$$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{CRUSHER}$ = maximum process weight, in tons/hr, for the crusher operation.

$F_{CRUSHER}$ = emission factor, lb PM/ton $soil_{CRUSHED}$, as noted in section 11.19.2 of AP-42, for the crusher operation.

C = control efficiency of dust control device, according to manufacturer's specifications.

v. determination of total annual PM emissions, E(total) in ton/yr:

E(total) = E(apron feed hopper) +
E (feed soil) + E (rock/soil) + E (crusher)

d. Emission Limitation(s)

2.14 x 10^{-5} Ci/yr of radionuclides

Applicable Compliance Method

To determine the actual worst case emission rate for radionuclides the permittee shall employ the following:

i. determination of annual radionuclides emissions from the feed soil load into apron feed hopper, E (apron feed hopper) in Ci/yr:

E (apron feed hopper)
= $H \times D \times W_{FEED\ SOIL} \times F_{FEED\ SOIL} \times U \times (1 \times 10^{-12}\ Ci/pCi) \times (1 - C/100) \times 454\ g/lb$

$W_{FEED\ SOIL}$ = maximum load-in process weight, in tons/hr, for the apron feed hopper load-in operation.

$F_{FEED\ SOIL}$ = emission factor, lb PM_{10} (radionuclides)/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42, for the apron feed hopper load-in operation.

U = maximum uranium concentration: 30 pCi/g for treated soil as allowed by NRC; 150 pCi/g for contaminated soil per on-site soil survey(s).

ii. determination of annual radionuclides emissions from the outdoor feed soil handling operations, E (feed soil) in Ci/yr:

E (feed soil)
= $H \times D \times W_{FEED\ SOIL} \times F_{FEED\ SOIL} \times U \times (1 \times 10^{-12}\ Ci/pCi) \times (1 - C/100) \times 454\ g/lb$

$W_{FEED\ SOIL}$ = maximum load-in process weight, in tons/hr, for the feed soil load-in operation.

$F_{FEED\ SOIL}$ = emission factor, lb PM_{10} (radionuclides)/ton $soil_{LOAD\text{-}IN}$, as noted in section 13.2.4 of AP-42, for the feed soil load-in operation.

U = maximum uranium concentration: 30 pCi/g for treated soil as allowed by NRC; 150 pCi/g for contaminated soil per on-site soil survey(s).

iii. determination of annual radionuclide emissions from indoor rock/soil handling operations, E (rock/soil) in Ci/yr:

$$E(\text{rock/soil}) = H \times D \times W_{ROCK/SOIL} \times F_{ROCK/SOIL} \times U \times (1 \times 10^{-12}\ \text{Ci/pCi}) \times (1 - C/100) \times 454\ \text{g/lb}$$

$W_{ROCK/SOIL}$ = maximum load-in process weight, in tons/hr, for the rock/soil load-in operation.

$F_{ROCK/SOIL}$ = emission factor, lb PM_{10} (radionuclides)/ton $soil_{LOAD-IN}$, as noted in section 13.2.4 of AP-42, for the rock/soil load-in operation.

iv. determination of annual radionuclide emissions from rock crusher operation, E (crusher) in Ci/yr:

$$E(\text{crusher}) = H \times D \times W_{CRUSHER} \times F_{CRUSHER} \times U \times (1 \times 10^{-12}\ \text{Ci/pCi}) \times (1 - C/100) \times 454\ \text{g/lb}$$

H = maximum operating hours, 16 hours/day.

D = maximum operating days, 365 days/yr.

$W_{CRUSHER}$ = maximum process weight, in tons/hr, for the crusher operation.

$F_{CRUSHER}$ = emission factor, lb PM_{10} (radionuclides)/ton $soil_{CRUSHED}$, as noted in section 11.19.2 of AP-42, for the crusher operation.

v. determination of total annual radionuclides emissions, E(total) in Ci/yr:

E(total) = E(apron feed hopper) + E (feed soil) + E (rock/soil) + E (crusher)

E. Miscellaneous Requirements

1. None.