State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-IN0107170019-11

January 11, 2011

Tim Orton
EnergySolutions, LLC
423 W 300 W
Suite 200
Salt Lake City, UT 84101

Dear Mr. Orton:

Re: Intent to Approve: Install Baghouse, Include Existing Silos and Emergency Generators, and Clarify Permitting Language
Project Number: N010717-0019

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Camron Harry, who may be reached at (801) 536-4232.

Sincerely,

Martin D Gray, Manager
New Source Review Section

MDG:CH:dn

cc: Tooele County Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

INTENT TO APPROVE: Install Baghouse, Include Existing Silos and Emergency Generators, and Clarify Permitting Language

Prepared by: Camron Harry, Engineer
Phone: (801) 536-4232
Email: caharry@utah.gov

INTENT TO APPROVE NUMBER

DAQE-IN0107170019-11

Date: January 11, 2011

EnergySolutions, LLC
Radioactive Material Disposal Site

Source Contact:
Mr. Tim Orton, Environmental Engineer
Phone: (801) 532-1330

Martin D Gray, Manager
Minor New Source Review Section
Utah Division of Air Quality

ABSTRACT

EnergySolutions, LLC (EnergySolutions) operates the Clive facility which provides waste management, treatment, and disposal services for low-level and naturally occurring radioactive wastes (LLRW/NORM), byproduct material such as uranium mill tailing, and mixed radioactive and RCRA hazardous waste. LLRW/NORM wastes are not treated prior to disposal; however, non-soil wastes may be combined with soil, local clays or a concrete-like controlled low strength material (CLSM) to meet debris placement requirements. EnergySolutions is requesting to install a baghouse to the product off-loading section of the batch plant, to include two (2) existing silos and three (3) emergency generators, increase haul road length, and to clarify existing permit language.

The EnergySolutions site will continue to be a minor source for all pollutants. The site is located in Tooele County; an attainment area of the NAAQS for all pollutants. NSPS regulations do not apply to this source. NESHAP (40 CFR 63) Subpart ZZZZ (National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) maintenance requirements apply to this source. Title V of the 1990 Clean Air Act does apply to this area source but it is exempt from the Operating Permit Program.

The potentials to emit, in tons per year, will change with this modification as follows: PM10 - 0.03, PM2.5 (subset of PM10) + 0.24, CO + 0.26, NOx + 1.23, SOx + 0.08, VOC + 0.10, and Total HAPs + 0.002

The changes in emissions from this modification, in tons per year, will result in the following potential to emit totals: PM10 = 0.67, PM2.5 (subset of PM10) = 0.36, CO = 2.29, NOx = 5.28, SOx = 0.46, VOC = 2.69, Total HAPs = 2.33

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Tooele Transcript on January 13, 2011. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

Name of Permittee:

EnergySolutions, LLC
423 W 300 W
Suite 200
Salt Lake City, UT 84101

Permitted Location:

Radioactive Material Disposal Site
Clive Facility
Clive, UT 84029

UTM coordinates: 321,400 m Easting, 4,506,100 m Northing, UTM Zone 12
SIC code: 4953 (Refuse Systems)

Section I: GENERAL PROVISIONS

I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]

I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

I.6 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

I.7 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 **Clive Facility**
Source Wide

II.A.2 **Bulk Reagent System**
Includes five (5) baghouses
Each with an air to cloth ratio of 5:1

II.A.3 **Mixed Waste Treatment Building**
Includes the following:
Shredders
Vibrating screens
Pulvi-Mixer (Tiller)

Controlled by a reverse jet baghouse with HEPA filter
Air to cloth ratio 2.5:1

II.A.4 **Mixed Waste Operations Building**
Controlled by a baghouse with HEPA filter

II.A.5 **Thermal Desorption Operations System**
Includes the following:

One (1) thermal desorption unit
One (1) refrigerated condensation unit
One (1) ambient temperature condensation unit
One (1) LPG furnace rated at 3.0 MMBtu/hr
Water treatment tanks
Nitrogen storage tanks
Miscellaneous material handling equipment

Controlled by three carbon filters (one HEPA filter and two prefilter)

II.A.6 **Batch Plant**
Includes the following equipment:

180 cubic yard per hour batch plant controlled by a baghouse
Cement storage silo controlled by a baghouse
Cement storage silo controlled by a bin vent
15 ton per hour screen plant
Conveyors and cement trucks

II.A.7 **Process Equipment**
One (1) 100 ton per hour shredder with water sprays

II.A.8 **Process and Mobile Equipment**
Includes the following equipment:

6-wheel trucks
Bulldozers
Front-end loaders
Backhoes
Compactors
Water trucks/tractors
Dump trucks (10-18 wheel)
Graders
Scrapers
Diesel locomotives
Concrete mixers less than one cubic yard each

Propane fired heaters rated less than 5.0 MMBtu/hr
Forklifts, cranes, generators, etc

This equipment listed for informational purposes only

II.A.9 **Railcar Rollover Operations**
Constructed with enclosures that minimize fugitive dust

II.A.10 **Railcar Digging Operations**

II.A.11 **Diesel Fired Emergency Generator**
400 kW engine provides emergency power to the Mixed Waste Operations Building

II.A.12 **Diesel Fired Emergency Generator**
134 kW (180 hp) engine provides emergency power for the fire suppression pump

II.A.13 **Diesel Fired Emergency Generator**
56 kW engine provides emergency power to the vacuum thermal desorption system

II.A.14 **Lime Kiln Dust (LKD) Silo**
1,400 cf portable silo equipped with an Airmax dust collector

II.A.15 **Mixed Waste Area Silo**
1,100 cf silo with baghouse

II.B Requirements and Limitations

II.B.1 Clive Facility

II.B.1.a EnergySolutions shall notify the Executive Secretary in writing when the installation of the new equipment has been completed and is operational. The new equipment includes the following: Baghouse located in the Batch Plant. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If construction and/or installation have not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401-18]

II.B.1.b The Mixed Waste Operations Building baghouse and HEPA filter shall control all process streams from the Mixed Waste Operations Building before being emitted to the atmosphere. [R307-401]

II.B.1.c The Mixed Waste Treatment Building baghouse and HEPA filter shall control all process streams from the Mixed Waste Treatment Building before being emitted to the atmosphere. [R307-401]

II.B.1.d Visible emissions from the following emission points shall not exceed the following values:

A. 0% opacity for
- Baghouses with HEPA filters
- Thermal Desorption System Exhaust
- Thermal Desorption System fugitives

B. 10% opacity for
- All screens
- All conveyor transfer points
- Bulk Reagent System and Waste Receiver Tank
- Baghouses without HEPA filters
- Concrete batch plant
- All silos
- Shredders with a rating greater than 50 tons per hour
- Entry/exit and ventilation openings at the covered Railcar Rollover Facilities
- Transfer points at the Railcar Digging Facility

C. 20% opacity for
- Conveyor drop points
- All stationary diesel engines
- Shredders with a rating less than 50 tons per hour
- All other points

Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9 or as approved by the Executive Secretary. [R307-201]

II.B.1.e Visible fugitive dust emissions from haul road traffic and mobile equipment in operational areas shall not exceed 20% opacity at any point. Visible emission determinations shall use procedures similar to Method 9. The normal requirement for observations are to be made at 15-second intervals over a six-minute period, however, shall not apply. Visible emissions shall be measured at the densest point of the plume but at a point not less than ½ vehicle length behind the vehicle and not less than ½ the height of the vehicle. [R307-201]

II.B.1.f The sulfur content of any fuel oil burned shall not exceed 0.015 percent by weight. Sulfur content shall be decided by ASTM Method D-4294-89, or approved equivalent. The sulfur content shall be tested if directed by the Executive Secretary. [R307-401]

II.B.1.g The owner/operator may operate emergency generators for the purpose of maintenance checks and readiness testing, provided that the tests are performed between the hours of 8:00 am to 5:00 pm Mountain Standard Time. Maintenance checks and readiness testing of such units is limited to 100 hours per rolling 12-month period per engine.

To determine compliance with a rolling 12-month total, by the first day of each month a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Hours of operation shall be determined by supervisor monitoring and maintaining an operations log which shall include time of day of operation. The records of operation shall be kept on a weekly basis and shall be kept for all periods when the facility is in operation. [40 CFR 63 Subpart ZZZZ]

II.B.2 **Production Limitations**

II.B.2.a The following limits shall not be exceeded:

A. Amount of material disposed at the site shall not exceed 1,500,000 tons per rolling 12-month period.

B. The total disturbed area shall not exceed 279 acres. Disturbed area shall be all areas that have had the surface area mechanically altered. Total disturbed area shall not include disturbed areas that have been inactive for at least six months or that have been reclaimed by capping, chemical treatment, or revegetation. Total disturbed area shall not include areas with buildings, parking lots, paved roads, paved areas, evaporation ponds, or other areas with no emissions.

C. 100,000 cubic yards of concrete per rolling 12-month period.

D. 7,300 hours of operation for bulldozing and compacting for cover/liner construction per rolling 12-month period.

E. 250,000 tons of material for cover/liner construction per rolling 12-month period.

F. The total area for active storage piles shall not exceed 8.1 acres. All inactive storage piles shall be those storage piles that have not had any material added to or removed from them since the last time they were water sprayed and/or chemically treated or they have not had any material added to or removed from them within the last six months.

To determine compliance with a rolling 12-month total EnergySolutions shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Material disposal and cover liner construction shall be determined by weigh scales and record keeping. Compliance with total disturbed area shall be determined using engineering records. Any time a change in total disturbed area exceeds 28 acres, the total disturbed area shall be recalculated and recorded. The records shall be kept on a monthly basis and for all periods when the plant is in operation. [R307-401]

II.B.3 **Roads & Fugitive Dust**

II.B.3.a A spray bar or hose shall be in place where bulk waste is being off-loaded. The spray bar or hose shall operate whenever the moisture content of the material in the rail cars is below 7%. If a spray bar or hose is used for all waste off-loaded at a specific area of the site, moisture content testing shall not be required for waste entering that area.

If required, the moisture content test shall be determined according to ASTM Method D-2216, D-4643, or D-3017 on the 40 mesh portion of the sample. Moisture content testing shall be performed on at least every fifth rail car that comes to the site and at least one test shall be run every day that cars are unloaded at the site. The spur located south of the mainline shall be used to store the cars that require spraying. Records of moisture content tests shall be kept for all periods when the plant is in operation. [R307-401-8]

II.B.3.b All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of water treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

A. Date
B. Number of treatments made, dilution ratio, and quantity
C. Rainfall received, if any, and approximate amount
D. Time of day treatments were made

[R307-401]

II.B.3.c The facility shall have less than 30 miles of minimally maintained haul roads in use at any one time. Haul roads are defined as those roads that waste and soil handling equipment (large equipment) may use during the course of operations. Maintained haul roads are those paved roads that are regularly cleaned (swept, scraped, washed down, etc.) when used as a haul road. [R307-401]

II.B.3.d Disturbed or stripped areas shall be kept sufficiently moist or chemically treated during the project to minimize fugitive emissions. These controls, or other equivalent control methods, shall remain operational during the project cycle and until the said areas have been reclaimed. The control methods used shall be operational as needed 24-hours per day, 365 days per year or until the area has been reclaimed. If an equivalent control method or chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of treatment and/or reclamation shall be kept for all periods when the plant is in operation. [R307-401]

II.B.3.e Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:

A. All screens
B. All unenclosed conveyor transfer points*

* enclosed is defined as having three or more sides and a top.

The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary. [R307-401]

II.B.3.f The moisture content of the material that will be disposed shall be maintained at a minimum of 2% by weight. The moisture content shall be tested if directed by the Executive Secretary using the appropriate ASTM method. [R307-401]

II.B.3.g The storage piles shall be watered to minimize generation of fugitive dust as dry conditions warrant or as determined necessary by the Executive Secretary. [R307-401]

II.B.3.h Water sprays or chemical dust suppression sprays shall be installed on the 100 ton per hour shredder to control fugitive emissions. The sprays shall operate when necessary, to ensure that the opacity limitations of this AO are not exceeded. If it is below freezing, then the water sprays are not required but EnergySolutions shall implement other methods of controlling fugitive emissions to ensure that the opacity limitations of this AO are not exceeded. [R307-401]

II.B.4 **Volatile Organic Compounds**

II.B.4.a The emissions of VOCs and HAPs from the Thermal Desorption Unit System and associated operations shall not exceed:

2.37 tons per rolling 12-month period for VOCs
2.33 tons per rolling 12-month period for total HAPs

HAPs emissions shall not exceed the Emission Threshold Value (ETV) lb/hr amounts listed in Attachment A.

Compliance with the VOC limitation shall be determined on a rolling 12-month total. Before the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.

The limit on individual HAPs and total HAPs are not required to be calculated until the VOC emissions exceed 1.5 tons per rolling 12-month period. If VOC emissions exceed 1.5 tons per rolling 12-month period, then speciation of HAPs for all waste streams over the previous 12-month period shall be performed.

Compliance with the total HAPs limitation shall be determined on a rolling 12-month total. The rolling 12-month totals of HAPs shall be calculated for the previous 12-month period within 10 days that the VOC emissions are determined to exceed 1.50 tons per rolling 12-month period. The VOC and HAP emissions shall be determined by maintaining a record of VOC and HAP emitting materials processed through the Thermal Desorption System each month. The following records shall be retained:

A. Specific waste stream identification for each waste stream processed through the thermal desorption system.

B. The total amount of waste material associated with each waste stream, prior to processing through the thermal desorption system.

C. The time required to process each waste stream.

D. Estimated weight percentages of known and/or expected HAPs within the waste stream based on generator process knowledge and/or waste profile records.

E. Amounts (concentrations) of volatile organic compounds within the waste stream based upon laboratory analysis of the waste prior to thermal desorption processing.

F. The calculated amount of HAP/VOC emitted based upon calculations assuming a carbon filter efficiency of 0.95 and a HEPA efficiency of 0.999.

The amount of VOCs or HAPs may be adjusted by quantifying and subtracting the amount of condensate collected from the system. [R307-401]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

MACT (Part 63), ZZZZ: Recipro. Int. Comb Engine (RICE)

PERMIT HISTORY

The final AO will be based on the following documents:

Is Derived From Additional Information dated December 13, 2010

Is Derived From	Additional Information dated November 19, 2010
Is Derived From	Additional Information dated October 14, 2010
Is Derived From	Notice of Intent dated August 16, 2010
Replaces	DAQE-AN0717016-06 dated September 8, 2006

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Tooele County
CDS B
Attainment Area, MACT (Part 63), Title V (Part 70) Area source

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds

Attachment A

Energy Solutions Desorption System HAPs

Hazardous Air Pollutant	Emission Threshold Value (ETV) (lb/hr)
Acetaldehyde	13.96
Acetonitrile	12.36
Acetophenone	18.08
Acrolein	0.07
Acrylamide	0.01
Acrylic acid	2.17
Acrylonitrile	1.6
Allyl chloride	1.15
Aniline	2.8
o-Anisidine	0.18
Benzene	0.59
Benzotrichloride	0.1
Benzyl chloride	0.89
Biphenyl	0.46
Bromoform	1.9
1, 3-Butadiene	0.54
Calcium cyanamide	0.18
Captan	1.84
Carbaryl	1.84
Carbon disulfide	11.46
Carbon tetrachloride	3.87
Catechol	8.29
Chlordane	0.18
Chlorine	0.53
2-Chloroacetophenone	0.12
Chlorobenzene	16.94
Chloroform	17.97
Chloroprene	13.33
Cresol/Cresylic acid (mixed isomers)	8.14
o-Cresol	8.14
m-Cresol	8.14
p-Cresol	8.14
Cumene	90.45
2,4-Dÿ (2,4-Dichlorophenoxyacetic Acid)	3.68
Diazomethane	0.04
Dibutyl phthalate	1.84
Dichloroethyl ether (Bis [2-chloroethyl] ether)	10.76
1,3-Dichloropropene	1.67
Dichlorvos	0.04
Diethanolamine	0.74
N,N-Dimethylaniline	9.12

Hazardous Air Pollutant	Emission Threshold Value (ETV) (lb/hr)
N,N-Dimethylformamide	11
1,1-Dimethylhydrazine	0.01
Dimethyl phthalate	1.84
Dimethyl sulfate	0.19
4,6-Dinitro-o-cresol (including salts)	0.07
1,4-Dioxane (1,4-Diethyleneoxide)	26.52
Epichlorohydrin (l-Chloro-2, 3-epoxypropane)	0.7
Ethyl acrylate	7.53
Ethylbenzene	159.78
Ethyl chloride (Chloroethane)	97.11
Ethylene dichloride (1,2-Dichloroethane)	14.89
Ethylene glycol	31
Ethyleneimine (Aziridine)	0.32
Ethylene oxide	0.66
Ethylidene dichlorideÿ (1,1-Dichloroethane)	148.96
Formaldehyde	0.01
Heptachlor	0.02
Hexachlorobutadiene	0.08
1,2,3,4,5,6-Hexachlorocyclohexane- (all stereo isomers, including lindane)	0.18
Hexachlorocyclopentadiene	0.04
Hexachloroethane	3.56
Hexamethylene diisocyanate	0.01
n-Hexane	64.86
Hydrochloric acid (Hydrogen Chloride)	2.31
Hydrogen fluoride (Hydrofluoric acid)	0.76
Hydroquinone	0.74
Isophorone	8.76
Maleic anhydride	0.15
Methanol	96.45
Methoxychlor	3.68
Methyl bromide (Bromomethane)	1.43
Methyl chloride (Chloromethane)	38
Methyl chloroform (1,1,1-Trichloroethane)	702.84
Methyl ethyl ketone (2-Butanone)	217.04
Methylhydrazine	0.01
Methyl iodide (Iodomethane)	4.27
Methyl isobutyl ketone (Hexone)	75.38
Methyl isocyanate	0.02
Methyl methacrylate	75.35
Methyl tert-butyl ether	18.4
Methylene chloride (Dichloromethane)	63.91
4,4'-Methylenediphenyl diisocyanate (MDI)	0.02
4,4'-Methylenedianiline	0.3
Naphthalene	19.29

Hazardous Air Pollutant	Emission Threshold Value (ETV) (lb/hr)
Nitrobenzene	1.85
2-Nitropropane	13.41
Parathion	0.04
Pentachloronitrobenzene (Quintobenzene)	0.18
Pentachlorophenol	0.18
Phenol	7.08
p-Phenylenediamine	0.04
Phosgene	0.15
Phosphine	0.15
Phosphorus	0.04
Phthalic anhydride	2.23
beta-Propiolactone	0.54
Propionaldehyde	17.49
Propoxur (Baygon)	0.18
Propylene dichloride (1,2-Dichloropropane)	127.55
Propylene oxide	1.75
1,2-Propylenimineÿ (2-Methylaziridine)	1.72
Quinone (p-Benzoquinone)	0.16
Styrene	31.35
1,1,2,2-Tetrachloroethane	2.53
Tetrachloroethylene (Perchloroethylene)	62.39
Toluene	69.33
2,4-Toluene diisocyanate	0.01
o-Toluidine	3.23
Toxaphene (chlorinated camphene)	0.06
1,2,4-Trichlorobenzene	11.5
1,1,2-Trichloroethane	20.08
Trichloroethylene	98.89
Triethylamine	1.52
Vinyl acetate	12.96
Vinyl bromide	0.27
Vinyl chloride	0.31
Vinylidene chloride (1,1-Dichloroethylene)	7.3
Xylenes (mixed isomers)	159.78
o-Xylene	159.78
m-Xylene	159.78
p-Xylene	159.78
Antimony Compounds	0.18
Chromium Compounds - Metal and Cr III compounds	0.18
Chromium Compounds - Water-soluble Cr VI compounds	0.01
Cobalt Compounds	0.01
Lead Compounds	0.02
Manganese Compounds	0.07
Mercury Compounds - aryl compounds	0.04

Hazardous Air Pollutant	Emission Threshold Value (ETV) (lb/hr)
Mercury Compounds - elemental and inorganic forms	0.01
Nickel Compounds - elemental	0.55
Nickel Compounds - soluble inorganic compounds	0.04
Nickel Compounds - insoluble inorganic compounds	0.02
Nickel Compounds - nickel subsulfide	0.01
Selenium Compounds	0.07

* Polycyclic Organic Matter (POM), defined as a Hazardous Air Pollutant in Section 112(b) of the Clean Air Act.