



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

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April 8, 2004

Mr. Don Wright
UnderSea Sensor Systems, Inc.
4578 East Park Drive
Columbia City, Indiana 46725

Re: Registered Construction and Operation Status,
183-18483-00034

Dear Mr. Wright:

The application from UnderSea Sensor Systems, Inc., received on December 11, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following emission units for a sonobuoys manufacturing plant, to be located at 4578 East Park Drive, Columbia City, Indiana, are classified as registered:

- (a) Degreasing operations that do not exceed 145 gallons per 12 months and do not use halogenated solvents, including the following:
 - (1) One (1) cleaning operation, identified as C-1, constructed in 2004, and exhausting through stack S9.
 - (2) One (1) maintenance parts cleaner, identified as MPC, constructed in 2002, and exhausting inside the building.
 - (3) One (1) depotting operation, identified as DH-1, constructed in 2001, and exhausting through stack S10.
- (b) Seventeen (17) natural gas-fired space heaters, constructed in 1999, consisted of the following:
 - (1) Six (6) natural gas-fired space heaters, identified as RTU-1, 2, 4, 5, 6, and 7, each with a maximum heat input capacity of 0.4 MMBtu/hr.
 - (2) One (1) natural gas-fired space heater, identified as RTU-8, with a maximum heat input capacity of 0.35 MMBtu/hr.
 - (3) Three (3) natural gas-fired space heaters, identified as RTU-9, 10, and 11, each with a maximum heat input capacity of 0.25 MMBtu/hr.
 - (4) Six (6) natural gas-fired space heaters, identified as RTU-12, 13, 14, 15, 16, and 17, each with a maximum heat input capacity of 0.205 MMBtu/hr.
 - (5) One (1) natural gas-fired space heater, identified as RTU-18, with a maximum heat input capacity of 0.135 MMBtu/hr.
- (c) Six (6) soldering areas, constructed in 1999, each consuming less than 625 lbs/day of wire and using aerosol cans for plastic coating operations, consisting of the following:



- (1) Two (2) soldering areas, identified as SA-2 and 4, and exhausting through stacks S2 and S4.
- (2) Three (3) soldering areas, identified as SA-1, 3, and 5, and exhausting inside the building.
- (3) One (1) soldering area, identified as SA-6, and exhausting through stack S9.
- (d) Two (2) primer applications, identified as P-53 and P-QRS, constructed in 1999, using brush or flow coating method, and exhausting through stacks S1 and S6, respectively.
- (e) Two (2) electric adhesive curing ovens, identified as oven #4 and #5, constructed in 1999, and exhausting through stack S5.
- (f) Four (4) potting ovens, constructed in 1999, consisting of the following:
 - (1) Two (2) potting ovens, identified as ovens #1 and #3, and exhausting through stacks S1 and S7, respectively.
 - (2) Two (2) potting ovens, identified as ovens #7 and #8, and exhausting through stack S8.
- (g) Two (2) conveyor ovens, identified as ovens #2 and #6, constructed in 1999, and exhausting through stacks S3 and S1, respectively.
- (h) Two (2) adhesive applications, identified as AH1 and AH2, constructed in 2000, using brush coating method, and exhausting through stack S6.
- (i) One (1) winding operation, identified as W-1, constructed in 2000, using aerosol cans to apply coatings, and exhausting through stack S7.
- (j) One (1) assembly area, constructed in 1999, using aerosol cans, brushing coating, and roller coating methods, and exhausting inside the building.
- (k) Two (2) packing hoods, identified as PH1 and PH2, constructed in 2001, using wipe coating method, and exhausting through stack S6.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Pursuant to 326 IAC 8-3-2(Cold Cleaning Operations), for cold cleaning operations C-1, MPC, and DH-1, which were constructed after January 1, 1980, the Permittee shall:
 - (a) Equip the cleaner with a cover;
 - (b) Equip the cleaner with a facility for draining cleaned parts;
 - (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
 - (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
 - (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
3. Pursuant to 326 IAC 8-3-5(Cold Cleaner Degreaser Operation and Control), the degreasing operations C-1, MPC, and DH-1 (which use VOC containing solvents, were constructed after July 1, 1990 and do not have remote solvent reservoirs) have the following requirements:
- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilo Pascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.
- 4. Each of the metal coating operations at this source has actual VOC emissions less than 15 lbs/day. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) are not applicable. Any change or modification which may increase the VOC usage for any of the metal coating operations, including the clean-up solvent usage, to greater than 15 pounds per day must be approved by IDEM, OAQ before any such change may occur.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted to:

**Compliance Branch
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/YC

cc: File - Whitley County
Whitley County Health Department
Air Compliance - Ryan Hillman
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	UnderSea Sensor Systems, Inc.
Address:	4578 East Park Drive
City:	Columbia City, Indiana 46725
Authorized individual:	Douglas A. Randol
Phone #:	(260) 248-3500
Registration #:	183-18483-00034

I hereby certify that UnderSea Sensor Systems, Inc. is still in operation and is in compliance with the requirements of Registration 183-18483-00034.

Name (typed):
Title:
Signature:
Date:

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	UnderSea Sensor Systems, Inc.
Source Location:	4578 East Park Drive, Columbus City, Indiana 46725
County:	Whitley
SIC Code:	3812
Operation Permit No.:	R183-18483-00034
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed an application from UnderSea Sensor Systems, Inc. relating to the operation of a sonobuoys manufacturing plant.

Permitted Emission Units and Pollution Control Equipment

There are no permitted facilities operating at this source.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

*(a) One (1) cleaning operation, identified as C-1, constructed in 2004, with a maximum solvent usage less than 145 gallons/yr, using non-halogenated solvents, and exhausting through stack S9.

* Note: The potential to emit of this unit is less than the exemption thresholds in 326 IAC 2-1.1-3(e). However, the potential to emit VOC for the entire source will be greater than 10 tons/yr and less than 25 tons/yr after adding this new unit. Therefore, the entire source will be subject to the requirements of 326 IAC 2-5.5 (Registration) after adding this new unit.

Exempt Emission Units and Pollution Control Equipment

(a) Degreasing operations that do not exceed 145 gallons per 12 months and do not use halogenated solvents, including the following:

(1) One (1) maintenance parts cleaner, identified as MPC, constructed in 2002, and exhausting inside the building.

(2) One (1) depotting operation, identified as DH-1, constructed in 2001, and exhausting through stack S10.

(b) Seventeen (17) natural gas-fired space heaters, constructed in 1999, consisted of the following:

(1) Six (6) natural gas-fired space heaters, identified as RTU-1, 2, 4, 5, 6, and 7, each with a maximum heat input capacity of 0.4 MMBtu/hr.

- (2) One (1) natural gas-fired space heater, identified as RTU-8, with a maximum heat input capacity of 0.35 MMBtu/hr.
 - (3) Three (3) natural gas-fired space heaters, identified as RTU-9, 10, and 11, each with a maximum heat input capacity of 0.25 MMBtu/hr.
 - (4) Six (6) natural gas-fired space heaters, identified as RTU-12, 13, 14, 15, 16, and 17, each with a maximum heat input capacity of 0.205 MMBtu/hr.
 - (5) One (1) natural gas-fired space heater, identified as RTU-18, with a maximum heat input capacity of 0.135 MMBtu/hr.
- (c) Six (6) soldering areas, constructed in 1999, each consuming less than 625 lbs/day of wire and using aerosol cans for plastic coating operations, consisting of the following:
- (1) Two (2) soldering areas, identified as SA-2 and 4, and exhausting through stacks S2 and S4.
 - (2) Three (3) soldering areas, identified as SA-1, 3, and 5, and exhausting inside the building.
 - (3) One (1) soldering area, identified as SA-6, and exhausting through stack S9.
- (d) Two (2) primer applications, identified as P-53 and P-QRS, constructed in 1999, using brush or flow coating method, and exhausting through stacks S1 and S6, respectively.
- (e) Two (2) electric adhesive curing ovens, identified as oven #4 and #5, constructed in 1999, and exhausting through stack S5.
- (f) Four (4) potting ovens, constructed in 1999, consisting of the following:
- (1) Two (2) potting ovens, identified as ovens #1 and #3, and exhausting through stacks S1 and S7, respectively.
 - (2) Two (2) potting ovens, identified as ovens #7 and #8, and exhausting through stack S8.
- (g) Two (2) conveyor ovens, identified as ovens #2 and #6, constructed in 1999, and exhausting through stacks S3 and S1, respectively.
- (h) Two (2) adhesive applications, identified as AH1 and AH2, constructed in 2000, using brush coating method, and exhausting through stack S6.
- (i) One (1) winding operation, identified as W-1, constructed in 2000, using aerosol cans to apply coatings, and exhausting through stack S7.
- (j) One (1) assembly area, constructed in 1999, using aerosol cans, brushing coating, and roller coating methods, and exhausting inside the building.
- (k) Two (2) packing hoods, identified as PH1 and PH2, constructed in 2001, using wipe coating method, and exhausting through stack S6.

Existing Approvals

There are no air approvals issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 11, 2003.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	0.16
PM-10	0.16
SO ₂	0.01
VOC	11.5
CO	1.79
NO _x	2.13

HAPs	Potential to Emit (tons/yr)
MEK	0.49
Toluene	0.25
Methanol	0.17
Total	0.91

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (c) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

- (d) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is within the range listed in 326 IAC 2-5.5-1(b)(1)(B), therefore the source is subject to the provisions of 326 IAC 2-5.5.1.
- (e) Fugitive Emissions
 Since this type of operation is not in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination

County Attainment Status

The source is located in Whitley County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Whitley County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (b) Whitley County has been classified as attainment for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) Fugitive Emissions
 Since this type of operation is not in one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.16
PM-10	0.16
SO ₂	0.01
VOC	11.5
CO	1.79
NO _x	2.13
Single HAP	0.49

Combination HAPs	0.91
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- (a) This existing source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) These emissions are based on the total potential to emit of the entire source (see Appendix A).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on the potential to emit of the existing units.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.
- (c) The solvents used in the degreasing operations do not contain any halogenated HAP as defined in 40 CFR 63.460. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning (40 CFR Part 63.460 - 63.470, Subpart T) are not applicable to this source.
- (d) The potential to emit HAPs from this source is less than the major source thresholds for HAPs. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Metal Parts and Products Surface Coating (40 CFR 63, Subpart M) are not applicable.
- (e) The potential to emit HAPs from this source is less than the major source thresholds for HAPs. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Productions (40 CFR 63.4480 - 63.4581, Subpart P) are not applicable.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The source was constructed in 1999 and modified in 2000, 2001, 2002, and 2004. The source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and, since its construction in 1999, has had the potential to emit of any regulated pollutant before controls less than two hundred and fifty (250) tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The source was constructed in 1999 and modified in 2000, 2001, 2002, and 2004. Although constructed after the applicability date for this rule, the potential to emit HAPs from the entire source is less than the major source thresholds. Therefore, the requirements of 326 IAC 2-4.1 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Whitley County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Degreasing Operations C-1, MPC, and DH-1

326 IAC 8-3-2 (Cold Cleaning Operations)

Any degreaser using VOC containing solvents is considered a cold cleaning operation. The degreasing operations C-1, MPC, and DH-1 at this source were constructed after January 1, 1980 and are subject to 326 IAC 8-3-2. Pursuant to 326 IAC 8-3-2, for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreasers, C-1, MPC, and DH-1, which use VOC containing solvents, were constructed after July 1, 1990 and do not have remote solvent reservoirs. Therefore, these degreasing operations are subject to the following requirements of 326 IAC 8-3-5:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

- (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilo Pascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

State Rule Applicability – Natural Gas-Fired Space Heaters

There are no specifically applicable state requirements for the space heaters at this source.

State Rule Applicability – Soldering Areas (SA-1 through SA-6)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The soldering operations at this source consume less than 625 lbs/day of rod or wire. Therefore, the soldering operations are exempt for the requirements of 326 IAC 6-3-2, pursuant to 326 IAC 6-3-1(b)(9).

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The surface coating operations at the soldering areas were constructed after January 1, 1980 and each has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

State Rule Applicability – Other Existing Surface Coating Operations and Adhesive Applications

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

This source is under the Standard Industrial Classification Code major group #38 and applies coatings and adhesives to plastic, metal, and wood surfaces. Each of the metal coating operations and the adhesive applications at this source do not have actual VOC emissions greater than 15 lbs/day. Therefore, the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) are not applicable to the metal coating operations at this source. Any change or modification which may increase the VOC usage for any of the metal coating operations (including the clean-up solvent usage) to greater than 15 pounds per day, must be approved by IDEM, OAQ before any such change may occur.

Note: All the surface coating operations and the adhesive applications at the source apply coatings to different parts and are operated in parallel.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

The surface coating operations and the adhesive applications at this source do not apply coatings to wood furniture or cabinets. Therefore, the requirements of 326 IAC 8-2-12 are not applicable.

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The surface coating operations and the adhesive applications at this source were constructed after January 1, 1980 and each has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The coating and the adhesive application methods used at this source are roll coating, flow coating, brush coating, or using aerosol coating products. Therefore, the particulate emissions from the coating operations at this source are exempt from the requirements of 326 IAC 6-3-2, pursuant to 326 IAC 6-3-1(b).

Conclusion

The operation of this sonobuoys manufacturing plant shall be subject to the conditions of the Registration No.: 183-18483-00034.

Appendix A: Emission Calculations
VOC Emissions
From the Degreasing Operations C-1, MPC, and DH-1

Company Name: UnderSea Sensor Systems, Inc.

Address: 4578 East Park Dr., Columbia City, IN 46725

Registration: 183-18483-00034

Reviewer: ERG/YC

Date: January 28, 2004

Unit	*Solvent Used	Density (lbs/gal)	Weight % VOC	Maximum Usage (gal/day)	PTE of VOC (lbs/day)	PTE of VOC (tons/yr)
C-1	Isopropyl Alcohol	6.59	100%	3.00	19.8	3.61
MPC	SK Premium Gold	6.80	100%	0.02	0.14	0.02
DH-1	THF	7.50	100%	0.44	3.30	0.60
Total						4.24

* These solvents do not contain any regulated HAPs.

METHODOLOGY

PTE of VOC (lbs/day) = Density (lbs/gal) x Weight % VOC x Max. Usage (gal/day)

PTE of VOC (tons/yr) = Density (lbs/gal) x Weight % VOC x Max. Usage (gal/day) x 365 days/yr x 1 ton/2000 lbs

**Appendix A: Emission Calculations
Natural Gas Combustion
(MMBtu/hr < 100)
From Seventeen (17) Space Heaters**

**Company Name: UnderSea Sensor Systems, Inc.
Address: 4578 East Park Dr., Columbia City, IN 46725
Registration: 183-18483-00034
Reviewer: ERG/YC
Date: January 28, 2004**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

4.87

42.6

	Pollutant					
Emission Factor in lbs/MMCF	PM*	PM10*	SO ₂	**NO _x	VOC	CO
	7.6	7.6	0.6	100	5.5	84.0
Potential to Emit in tons/yr	0.16	0.16	0.01	2.13	0.12	1.79

*PM and PM10 emission factors are condensable and filterable PM10 combined.

**Emission Factors for NO_x: Uncontrolled = 100.

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Potential to Emit (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2000 lbs

**Appendix A: Emission Calculations
VOC Emissions
From the Surface Coating Operations**

**Company Name: UnderSea Sensor Systems, Inc.
Address: 4578 East Park Dr., Columbia City, IN 46725
Registration: 183-18483-00034
Reviewer: ERG/YC
Date: January 28, 2004**

Unit	*Material	Density (lbs/gal)	Weight % Organics	Maximum Throughput (unit/hr)	Maximum Usage (gal/unit)	Pounds VOC per gallon of coating	PTE of VOC (lbs/hr)	PTE of VOC (lbs/day)	PTE of VOC (tons/yr)
SA 1-6	Flux Remover	10.0	3.80%	27	0.0040	0.38	0.04	0.99	0.18
P-QRS	Cup Primer	6.89	29.0%	27	0.0017	2.00	0.09	2.20	0.40
P-53	CF1-135 Primer	6.34	83.6%	27	0.0001	5.30	0.01	0.34	0.06
Ovens	FH 3530 A/B	8.60	3.17%	27	0.0330	0.27	0.24	5.83	1.06
Ovens	Stycast	9.12	0.90%	27	0.0165	0.08	0.04	0.88	0.16
Ovens	R-2188 A/B	9.34	0.90%	27	0.0019	0.08	0.00	0.10	0.02
W-1	Lacquer	6.12	50.9%	27	0.0004	3.12	0.03	0.81	0.15
Assembly	ESD Spray	8.15	5.90%	27	0.0004	0.48	0.01	0.12	0.02
Assembly	Blue Glue	7.49	42.9%	27	0.0001	3.21	0.01	0.21	0.04
AH-1	Window Adhesive	8.33	90.0%	27	0.0001	7.50	0.02	0.49	0.09
AH-2	Orange Adhesive	7.93	83.0%	27	0.0001	6.58	0.02	0.43	0.08
Assembly	Bostic 4858	7.66	69.8%	27	0.0001	5.35	0.01	0.35	0.06
Assembly	Adhesive 42	5.80	63.4%	27	0.00004	3.68	0.00	0.10	0.02
Assembly	Thermoplastic Resin	8.17	0.55%	27	0.0025	0.04	0.00	0.07	0.01
Assembly	Mold Release	6.58	46.1%	27	0.0001	3.03	0.01	0.20	0.04
Assembly	Black Ink	7.45	95.3%	27	0.0005	7.10	0.10	2.30	0.42
Assembly	White Ink	7.48	90.7%	27	0.0005	6.78	0.09	2.20	0.40
Ovens	G909	9.34	0.00%	27	0.0007	0.00	0.00	0.00	0.00
PH 1 and 2	Isopropyl Alcohol	6.59	100%	27	0.0050	6.59	0.89	21.4	3.90
Total							1.62		7.11

* All materials are applied by aerosol cans, brush coating, flow coating, or wipe coating method. Therefore, the PM/PM10 emissions from these coating operations are negligible.

METHODOLOGY

Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)

PTE of VOC (lbs/hr) = Pounds of VOC per Gallon coating (lbs/gal) * Max. Throughput (unit/hr) * Max. Usage (gal/unit)

PTE of VOC (lbs/day) = Pounds of VOC per Gallon coating (lbs/gal) * Max. Throughput (unit/hr) * Max. Usage (gal/unit) * (24 hr/day)

PTE of VOC (tons/yr) = Pounds of VOC per Gallon coating (lbs/gal) * Max. Throughput (unit/hr) * Max. Usage (gal/unit) * (8760 hr/yr) * (1 ton/2000 lbs)

**Appendix A: Emission Calculations
HAP Emissions
From the Surface Coating Operations**

Company Name: UnderSea Sensor Systems, Inc.

Address: 4578 East Park Dr., Columbia City, IN 46725

Registration: 183-18483-00034

Reviewer: ERG/YC

Date: January 28, 2004

Material	Density (lbs/gal)	Maximum Throughput (unit/hr)	Maximum Usage (gal/unit)	Weight % MEK	PTE of MEK (tons/yr)	Weight % Toluene	PTE of Toluene (tons/yr)	Weight % Methanol	PTE of Methanol (tons/yr)
Flux Remover	10.0	27	0.0040	0.00%	0.00	0.00%	0.00	3.51%	0.17
Cup Primer	6.89	27	0.0017	29.0%	0.40	0.00%	0.00	0.00%	0.00
CF1-135 Primer	6.34	27	0.0001	0.00%	0.00	0.00%	0.00	0.00%	0.00
FH 3530 A/B	8.60	27	0.0330	0.00%	0.00	0.00%	0.00	0.00%	0.00
Stycast	9.12	27	0.0165	0.00%	0.00	0.00%	0.00	0.00%	0.00
R-2188 A/B	9.34	27	0.0019	0.00%	0.00	0.00%	0.00	0.00%	0.00
Lacquer	6.12	27	0.0004	0.00%	0.00	17.0%	0.05	0.00%	0.00
ESD Spray	8.15	27	0.0004	0.00%	0.00	0.00%	0.00	0.00%	0.00
Blue Glue	7.49	27	0.0001	42.9%	0.04	0.00%	0.00	0.00%	0.00
Window Adhesive	8.33	27	0.0001	0.00%	0.00	0.00%	0.00	0.00%	0.00
Orange Adhesive	7.93	27	0.0001	0.00%	0.00	0.00%	0.00	0.00%	0.00
Bostic 4858	7.66	27	0.0001	56.9%	0.05	6.30%	0.01	0.00%	0.00
Adhesive 42	5.80	27	0.00004	0.00%	0.00	0.00%	0.00	0.00%	0.00
Thermoplastic Resin	8.17	27	0.0025	0.00%	0.00	0.00%	0.00	0.00%	0.00
Mold Release	6.58	27	0.0001	0.00%	0.00	0.00%	0.00	0.00%	0.00
Black Ink	7.45	27	0.0005	0.00%	0.00	21.7%	0.10	0.00%	0.00
White Ink	7.48	27	0.0005	0.00%	0.00	21.7%	0.10	0.00%	0.00
G909	9.34	27	0.0007	0.00%	0.00	0.00%	0.00	0.00%	0.00
Isopropyl Alcohol	6.59	27	0.0050	0.00%	0.00	0.00%	0.00	0.00%	0.00
Total					0.49		0.25		0.17

Total HAPs = 0.90 tons/yr

METHODOLOGY

PTE of HAP (tons/yr) = Density (lbs/gal) x Max. Throughput (unit/hr) x Max. Usage (gal/unit) x Weight % HAP x 8760 hr/yr x 1 ton/2000 lbs