STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

October 3, 2006

DAVID P. LITTELL
COMMISSIONER

Mr. Al Lelis
OSRAM Sylvania, Inc.
100 Endicott Street
Danvers, MA 01923

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0002381
Maine Waste Discharge License (WDL) Application #W000714-5S-G-R
Final Permit/License

Dear Mr. Lelis:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

Bill Hinkel
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Beth DeHaas, DEP
Sandy Lao, USEPA
File #0714

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
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BANGOR, MAINE 04401
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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

OSRAM SYLVANIA, INC.	) MAINE POLLUTANT DISCHARGE
TREATED GROUND WATER	) ELIMINATION SYSTEM PERMIT
WALDOBORO, WALDO COUNTY	) AND
#ME0002381	) WASTE DISCHARGE LICENSE
#W000714-5S-G-R **APPROVAL**	) **RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, §1251, *et seq.*, and Maine law, 38 M.R.S.A., §414-A *et seq.*, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of OSRAM SYLVANIA, INC. (Osram Sylvania), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

Osram Sylvania has applied to the Department for renewal of Waste Discharge License (WDL) #W000714-5N-F-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0002381 issued on September 18, 2001. The 9/18/01 MEPDES permit authorized the discharge of process wastewater via Outfall #001A and treated ground water via Outfall #006A from the Osram Sylvania manufacturing facility in Waldoboro, Maine, to the Medomak River, Class SB, in Waldoboro, Maine. The 9/18/01 MEPDES permit is scheduled to expire on September 18, 2006.

In this permitting action, the applicant seeks to eliminate authorization to discharge wastewater from the via Outfall #001A. As of February 28, 2006, Osram Sylvania's Waldoboro facility ceased all manufacturing operations. Osram Sylvania seeks to carry forward authorization to discharge treated ground water from a ground water remediation project to the Medomak River.

PERMIT SUMMARY

This permitting action is similar to the 9/18/01 permitting action in that it is:

1. Carrying forward the daily maximum concentration reporting requirement for total arsenic based on the potential for the discharge of arsenic via Outfall #006A.

This permitting action is different from the 9/18/01 permitting action in that it is:

1. Eliminating authorization to discharge via Outfall #001A and all Special Conditions, effluent limitations and monitoring requirements for Outfall #001A, as the facility has ceased all wastewater discharges from this point source, and revising the status of Outfall #001A from "active" to "inactive" for purposes of Permit Compliance System (PCS) data management;

2. Revising the monthly average discharge flow limitation from 0.036 MGD to 10,000 gallons per day (GPD), revising the daily maximum discharge flow reporting requirement from million gallons per day (MGD) to gallons per day (GPD), and revising the minimum monitoring frequency requirement to once per calendar quarter for Outfall #006A;

3. Eliminating the daily maximum concentration limitations and monitoring requirements for chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, methylene chloride, toluene, 1,2-Transdichloroeytylene, 1,1,1-Trichloroethane, trichloroethylene, and total lead based on the results of facility testing for Outfall #006A;

4. Eliminating the daily maximum concentration limitation and establishing a daily maximum concentration reporting requirement for tetrachloroethylene for Outfall #006A;

5. Eliminating the daily maximum concentration reporting requirement for total chromium and total selenium for Outfall #006A;

6. Establishing a daily maximum mass reporting requirements for total arsenic based on the potential for the discharge of arsenic via Outfall #006A; and

7. Eliminating the pH range limitation for Outfall #006A.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet, dated October 3, 2006, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharges will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A. §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of OSRAM SYLVANIA, INC. to discharge a monthly average flow of up to 10,000 gallons per day of treated ground water to the Medomak River, Class SB, in Waldoboro, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. The expiration date of this permit is five (5) years from the date of signature below.

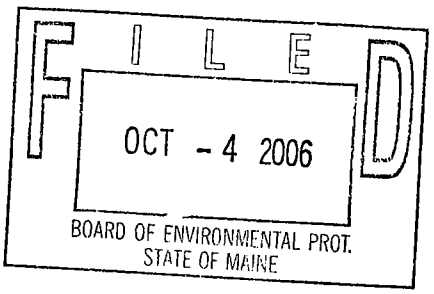
DONE AND DATED AT AUGUSTA, MAINE, THIS 3RD DAY OF October, 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 10, 2006
Date of application acceptance: August 23, 2006



Date filed with Board of Environmental Protection: _____

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0002381 / #W000714-5S-G-R October 3, 2006

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **treated ground water** from **Outfall #006A** to the Medomak River in Waldoboro, Maine. Such discharges shall be limited and monitored by the permittee as specified below[1]:

Effluent Characteristic	Discharge Limitations		Minimum Monitoring Requirements			
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	10,000 GPD *[07]*	Report GPD *[07]*	---	---	1/Quarter *[01/90]*	Estimate *[ES]*
Total Arsenic *[01002]*	Report lbs./day *[26]*	---	Report µg/L[2] *[28]*	---	1/Quarter *[01/90]*	Grab *[GR]*
Tetrachloroethene *[78389]*	---	---	---	Report µg/L[3] *[28]*	1/Quarter *[01/90]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Page 6 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

1. **Monitoring – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Effluent monitoring shall be conducted at the effluent end of the dissolved air flotation (DAF) unit**, or other location specified by the Department. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

2. **Total Arsenic** – Detectable results: All detectable analytical test results shall be reported to the Department including results which are detected below the Department's reporting limit (RL) for arsenic of 5 µg/L. If the concentration result is at or above the RL, the concentration shall be reported at that level. The mass shall be calculated based on the detected concentration and the flow discharged for the day in which the sample was taken.

   Non-detectable results: If the analytical test result for arsenic is below the RL of 5 µg/L, the concentration result shall be reported as <X where X is the detection level achieved by the laboratory for that test. Because a mass cannot be calculated with a less than value, report less than the applicable permit mass limit.

3. **Tetrachloroethene** – Detectable results: All detectable analytical test results shall be reported to the Department including results which are detected below the Department's reporting limit (RL) for tetrachloroethene of 5 µg/L. If the concentration result is at or above the RL, the concentration shall be reported at that level. The mass shall be calculated based on the detected concentration and the flow discharged for the day in which the sample was taken.

   Non-detectable results: If the analytical test result for tetrachloroethene is below the RL of 5 µg/L, the concentration result shall be reported as <X where X is the detection level achieved by the laboratory for that test. Because a mass cannot be calculated with a less than value, report less than the applicable permit mass limit.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharges shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. MONITORING AND REPORTING

Monitoring results obtained during the previous calendar quarter shall be summarized for each calendar quarter and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office** such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the facility inspector (unless otherwise specified by the Department) at following address:

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333-0017

D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of any substantial change (increase or decrease) in the volume or character of pollutants being discharged. For the purposes of this section, notice regarding substantial change shall include information on:

1. the quality and quantity of water discharged; and

2. any anticipated impact caused by the change in the quantity or quality of the water to be discharged.

SPECIAL CONDITIONS

E. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #006A. Discharges of wastewater from any other point source that are not authorized under this or another State permit are prohibited and shall be reported in accordance with Standard Condition B(5), *Bypasses,* of this permit.

F. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

G. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **OCTOBER 3, 2006**

MEPDES PERMIT: **#ME0002381**
WASTE DISCHARGE LICENSE: **#W000714-5S-G-R**

NAME AND ADDRESS OF APPLICANT:

OSRAM SYLVANIA
100 ENDICOTT STREET
DANVERS, MASSACHUSETTS 01923

COUNTY: **LINCOLN**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

OSRAM SYLVANIA, INC.
405 FRIENDSHIP STREET
WALDOBORO, MAINE 04572

RECEIVING WATER / CLASSIFICATION: **MEDOMAK RIVER/CLASS SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. AL LELIS, OSRAM SYLVANIA, INC. 978-750-2611**

1. APPLICTION SUMMARY

Application: Osram Sylvania, Inc. (Osram Sylvania) has applied to the of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W000714-5N-F-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0002381 issued on September 18, 2001. The 9/18/01 MEPDES permit authorized the discharge of process wastewater via Outfall #001A and treated ground water via Outfall #006A from the Osram Sylvania manufacturing facility in Waldoboro, Maine, to the Medomak River, Class SB, in Waldoboro, Maine. The 9/18/01 MEPDES permit is scheduled to expire on September 18, 2006.

In this permitting action, the applicant seeks to eliminate authorization to discharge wastewater via Outfall #001A. As of February 28, 2006, Osram Sylvania's Waldoboro facility ceased all manufacturing operations. Osram Sylvania seeks to carry forward authorization to discharge treated ground water from a ground water remediation system to the Medomak River.

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 9/18/01 permitting action in that it is:**

1. Carrying forward the daily maximum concentration reporting requirement for total arsenic based on the potential for the discharge of arsenic via Outfall #006A.

This permitting action is different from the 9/18/01 permitting action in that it is:

1. Eliminating authorization to discharge via Outfall #001A and all Special Conditions, effluent limitations and monitoring requirements for Outfall #001A, as the facility has ceased all wastewater discharges from this point source, and revising the status of Outfall #001A from "active" to "inactive" for purposes of Permit Compliance System (PCS) data management;

2. Revising the monthly average discharge flow limitation from 0.036 MGD to 10,000 gallons per day (GPD), revising the daily maximum discharge flow reporting requirement from million gallons per day (MGD) to gallons per day (GPD), and revising the minimum monitoring frequency requirement to once per calendar quarter for Outfall #006A;

3. Eliminating the daily maximum concentration limitations and monitoring requirements for chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, methylene chloride, toluene, 1,2-Transdichloroeytylene, 1,1,1-Trichloroethane, trichloroethylene, and total lead based on the results of facility testing for Outfall #006A;

4. Eliminating the daily maximum concentration limitation and establishing a daily maximum concentration reporting requirement for tetrachloroethylene for Outfall #006A;

5. Eliminating the daily maximum concentration reporting requirement for total chromium and total selenium for Outfall #006A;

6. Establishing a daily maximum mass reporting requirements for total arsenic based on the potential for the discharge of arsenic via Outfall #006A; and

7. Eliminating the pH range limitation for Outfall #006A.

b. Facility History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed for Osram Sylvania's Waldoboro facility.

May 31, 1988 – The Department ratified an Administrative Order by Consent with Osram Sylvania, which included an order to operate a ground water remediation system for the "purposes of extracting contaminated ground water in order to restore the water quality of the unconsolidated and bedrock aquifers beneath and adjacent to the site in a timely manner to levels protective of public health and the environment."

2. PERMIT SUMMARY (cont'd)

December 24, 1996 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit modification #ME0002381 to Osram Sylvania for the discharge of treated process wastewater and treated ground water via two outfall points. The 12/24/96 NPDES permit superseded NPDES permits issued on December 13, 1995, September 28, 1988, May 19, 1983, and May 30, 1975 (earliest NPDES permit on file with the Department).

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine.

September 18, 2001 – The Department issued WDL #W000714-5N-F-R/MEPDES permit #ME0002381 to Osram Sylvania for the monthly average discharge of 0.05 MGD of industrial process wastewater via Outfall #001A and for the monthly average discharge of 0.036 MGD of treated ground water via Outfall #006A to the Medomak River in Waldoboro. The 9/18/01 WDL/MEPDES permit superseded WDL Modification #W000714-44-E-R issued on October 4, 1996, WDL #W000714-44-D-R issued on November 9, 1995, WDL Transfer #W000714-44-E-T issued on April 22, 1993, WDL Amendment #W000714-44-C-A issued on June 15, 1989, WDL Amendment (not numbered) issued on July 22, 1987, and WDL #W000714-44-A-R issued on March 25, 1985 (earliest Order on file with the Department).

August 10, 2006– Osram Sylvania submitted a timely and complete General Application to the Department for renewal of the 9/18/01 MEPDES permit. The application was accepted for processing on August 23, 2006 and was assigned WDL #W000714-5S-G-R / MEPDES #ME0002381.

c. Source Description: Osram Sylvania's Waldoboro facility is located on Friendship Street in Waldoboro, Maine. A map prepared by the Department showing the location of the facility and receiving water is included as Fact Sheet Attachment A. Osram Sylvania has ceased all manufacturing operations at its Waldoboro facility and discharges of treated process wastewater via Outfall #001A ceased on February 28, 2006 according to a letter from Osram Sylvania's plant manager to the Department, dated March 3, 2006. Osram Sylvania is, however, still required to continue operation of a ground water remediation system, which is the source of wastewater discharged via Outfall #006A.

The ground water extraction system at the facility consists of four active shallow bedrock wells (EW-1, EW-2, EW-3, and EW-4) and a deep bedrock extraction well (MW-3), which is the well from which the majority of ground water is extracted. Water extracted from these wells is conveyed to a buried concrete accumulation tank. Water from this tank is pumped constantly through an air stripper tower for reduction of volatile organic compounds. The extraction system maintains a fixed capture zone by maintaining preset water levels in the wells. Effluent from the air stripper (*i.e.* treated ground water) is discharged to the Medomak River via a four-inch diameter pipe designated Outfall #006A in this permitting action. The outfall pipe terminates in an open ditch which serves as a conveyance to the Medomak River.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. §414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., §420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §469 states, "all estuarine and marine waters lying within the boundaries of the State and which are not otherwise classified are Class SB waters." The Medomak River at the point of discharge is not otherwise classified and is therefore a Class SB water. Maine law, 38 M.R.S.A. §465 (B)(2) describes the standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Medomak River Estuary as, *"Category 4-B-1: Estuarine and Marine Waters Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment."* Impairment in this context refers to the designated use of habitat for fish and other marine life. The Report states that the impairment is caused by municipal point source discharge, but further states that the municipal point source was eliminated. Data are not available as of the date of this permitting action to determine if elimination of the municipal point source has resulted in attainment of the receiving water. The Report lists the Medomak River at Waldoboro as, *"Category 5-B-1: Estuarine and Marine Waters Impaired only by Bacteria (TMDL Required)."* The Report lists elevated fecal coliform bacteria after rainfall from non-point sources as the source of pollution. The Department has not scheduled a Total Maximum Daily Load (TMDL) for the Medomak River as of the date of this permitting action. The Report lists all estuarine and marine waters as, *"Category 4-B-3: Estuarine and Marine Waters Impaired by Atmospheric Deposition of Mercury."* The Report lists all estuarine and marine waters as, *"Category 5-D: Estuarine and Marine Waters Impaired by Legacy Pollutants."* Impairment in this context refers to these waters partially supporting the designated use of fishing (fish and shellfish consumption) due to elevated levels of PCBs in tissues of some fish as well as other persistent bioaccumulating substances in lobster tomalley. The Department has no information at this time that the discharge from Osram Sylvania causes or contributes to non-attainment of the standards of classification for Class SB waters.

The Maine Department of Marine Resources (DMR) assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (instream thresholds established in the National

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #26 is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program. The shellfish closure area is identified on the map included as Fact Sheet Attachment A. The Department is making the determination that the discharge of treated ground water from Osram Sylvania does not cause or contribute to the closure of the shellfish harvesting area.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a monthly average discharge flow limitation of 0.036 million gallons per day (MGD). This permitting action is revising the monthly average discharge flow limitation to 10,000 gallons per day (GPD), as requested by the applicant based on current operating rates. The previous permitting action established, and this permitting action is carrying forward, a daily maximum discharge flow reporting requirement. This permitting action is revising the minimum monitoring frequency requirement from once per month to once per calendar quarter for discharge flow in consideration of the reduction in discharge volume.

A review of the monthly average and daily maximum flow data as reported on the Discharge Monitoring Reports submitted to the Department for the period April 2002 – January 2006 indicates the average monthly flow has ranged from 500 GPD to 3,000 GPD with an arithmetic mean of 2,400 GPD. The maximum flow has ranged from 2,000 GPD to 19,000 GPD with an arithmetic mean of 5,000 GPD.

b. Dilution Factors: Department rule, 06-096 CMR Chapter 530 Section 4.A.2.a, *Surface Water Toxics Control Program*, states that, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* The dilution factors associated with the discharge from Osram Sylvania specified below are based on a Department best professional judgment determination in consideration of results of an extensive dye study that was conducted to determine the mixing characteristics of the effluent as it exits the conveyance ditch and enters the receiving waters.

Acute = 425:1 Chronic = 500:1 Harmonic mean[1] = 1,500:1

[1] The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, *"Technical Support Document for Water Quality-Based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

c. Arsenic (Total): The previous permitting action established a daily maximum concentration reporting requirement for total arsenic based on the presence of this chemical in soil and ground water samples taken between March 1985 and April 1987 (as part of the ground water remediation project). Department rule, 06-096 CMR, Chapter 530 Section 3.E. states:

> *For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*

A review of the daily maximum effluent arsenic data as reported on the Discharge Monitoring Reports submitted to the Department for the period April 2002 – November 2005 indicates the analytical test result from a sample collected on April 15, 2003 (and reported on the June 2003 Discharge Monitoring Report) was 24 µg/L. No other test results were reported above the minimum reporting limit of 5 µg/L. On August 24, 2006, the Department conducted a statistical evaluation on the arsenic tests results from the period specified above in accordance with the statistical approach outlined above. The 8/24/06 statistical evaluation indicates the 4/15/03 arsenic value of 24 µg/L does not demonstrate a reasonable potential to exceed the acute, chronic or human health ambient water quality criteria (AWQC) for arsenic. However, this permitting action is carrying forward a daily maximum concentration reporting requirement and establishing a daily maximum mass reporting requirement for total arsenic based on a Department best professional judgment determination to monitor this pollutant in the wastewater to protect receiving water quality. This permitting action is establishing a minimum monitoring frequency requirement of once per calendar quarter for total arsenic. The Department reserves the right to reopen this permit in accordance with Special Condition G, and with notice to the permittee, to establish effluent limitations for total arsenic if results indicate the discharge exceeds or has a reasonable potential to exceed the ambient water quality criteria for arsenic.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

d. Chloroform: The previous permitting action established a daily maximum concentration limit of 13.1 µg/L for chloroform based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for chloroform indicates that the maximum effluent value reported was 2.0 µg/L. The Department has established a minimum reporting limit (RL) of 5.0 µg/L for chloroform. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of effluent chloroform test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 2.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical human health AWQC for chloroform. It is noted that the Department has not established acute or chronic AWQC for chloroform. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for chloroform. In addition, the Department conducted a statistical evaluation on air stripper *influent* test results. A discussion of this evaluation is provided in Section 6(r) of this Fact Sheet.

e. Chromium (Total): The previous permitting action established a daily maximum concentration reporting requirement for total chromium based on the presence of this chemical in soil and ground water samples taken between March 1985 and April 1987. A review of the most recent 60 months of effluent data on file with the Department for total chromium indicates that the maximum effluent value reported was 10 µg/L. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of total chromium test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute or chronic AWQC for chromium. It is noted that the Department has not established human health AWQC for total chromium. Therefore, this permitting action is eliminating the daily maximum concentration reporting requirement for total chromium.

f. 1,1-Dichloroethane: The previous permitting action established a daily maximum concentration limit of 230.0 µg/L for 1,1-Dichloroethane based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for chloroform indicates that the maximum effluent value reported was 3.3 µg/L. The Department has established a minimum RL of 5.0 µg/L for 1,1-Dichloroethane. The Department has not established AWQC for 1,1-Dichloroethane; thus a statistical evaluation of these data was not conducted. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for 1,1-Dichloroethane.

g. 1,2-Dichloroethane: The previous permitting action established a daily maximum concentration limit of 2.7 µg/L for 1,2-Dichloroethane based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for 1,2-Dichloroethane indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for 1,2-Dichloroethane. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of 1,2-Dichloroethane test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute, chronic or human health AWQC for 1,2-Dichloroethane. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for 1,2-Dichloroethane. In addition, the Department conducted a statistical evaluation on air stripper *influent* test results. A discussion of this evaluation is provided in Section 6(r) of this Fact Sheet.

h. 1,1- Dichloroethylene: The previous permitting action established a daily maximum concentration limit of 48.0 µg/L for 1,1- Dichloroethylene based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for 1,1- Dichloroethylene indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for 1,1- Dichloroethylene. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of 1,1- Dichloroethylene test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute or human health AWQC for 1,1- Dichloroethylene. It is noted that the Department has not established chronic AWQC for 1,1- Dichloroethylene. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for 1,1- Dichloroethylene. In addition, the Department conducted a statistical evaluation on air stripper *influent* test results. A discussion of this evaluation is provided in Section 6(r) of this Fact Sheet.

i. Lead (Total): The previous permitting action established a daily maximum concentration limit of 9 µg/L for total lead based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for total lead indicates that the maximum effluent value reported was 13.0 µg/L. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of total lead test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation indicates that the discharge (considering the reduced flow limit and increased dilution factors) does not exceed or have a reasonable potential to exceed the critical acute or chronic AWQC for lead. It is noted that the Department has not established human health AWQC for total lead. Therefore, this permitting action is eliminating the daily maximum concentration limit for total lead.

j. Selenium (Total): The previous permitting action established a daily maximum concentration reporting requirement for total selenium based on the presence of this chemical in soil and ground water samples taken between March 1985 and April 1987. A review of the most recent 60 months of effluent data on file with the Department for total selenium indicates that the maximum effluent value reported was 50 µg/L. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of total selenium test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute, chronic or human health AWQC for selenium. Therefore, this permitting action is eliminating the daily maximum concentration limit for total selenium.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

k. Methylene Chloride: The previous permitting action established a daily maximum concentration limit of 1.1 µg/L for methylene chloride based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for methylene chloride indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for methylene chloride. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of methylene chloride test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical human health AWQC for methylene chloride. It is noted that the Department has not established acute or chronic AWQC for methylene chloride. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for methylene chloride.

l. Tetrachloroethylene: The previous permitting action established a daily maximum concentration limit of 37.4 µg/L for tetrachloroethylene (synonym tertachloroethene) based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for tetrachloroethylene indicates that the maximum effluent value reported was 3.3 µg/L. The Department has established a minimum RL of 5.0 µg/L for tetrachloroethylene. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of tetrachloroethylene test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 3.3 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute, chronic, or human health AWQC for tetrachloroethylene. However, the Department has conducted a statistical evaluation on air stripper *influent* test results for this parameter as discussed in Section 6(r) of this Fact Sheet. As a result of that evaluation, this permitting action is eliminating the daily maximum concentration limit but is carrying forward a quarterly, daily maximum concentration reporting requirement for tertachloroethene. See Section 6(r) of this Fact Sheet for additional discussion regarding tertachloroethene.

m. Toluene: The previous permitting action established a daily maximum concentration limit of 1.0 µg/L for toluene based upon its detection limit in water. A review of the most recent 60 months of effluent data on file with the Department for toluene indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for toluene. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of toluene test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute, chronic, or human health AWQC for toluene. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for toluene.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

n. 1,2-Transdichloroethylene: The previous permitting action established a daily maximum concentration limit of 11.2 µg/L for 1,2-Transdichloroethylene based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for 1,2-Transdichloroethylene indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for 1,2-Transdichloroethylene. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of 1,2-Transdichloroethylene test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute or human health AWQC for 1,2-Transdichloroethylene. It is noted that the Department has not established chronic AWQC for 1,2-Transdichloroethylene. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for 1,2-Transdichloroethylene. In addition, the Department conducted a statistical evaluation on air stripper *influent* test results. A discussion of this evaluation is provided in Section 6(r) of this Fact Sheet.

o. 1,1,1-Trichloroethane: The previous permitting action established a daily maximum concentration limit of 1.0 µg/L for 1,1,1-Trichloroethane based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for 1,1,1-Trichloroethane indicates that the maximum effluent value reported was 1.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for 1,1,1-Trichloroethane. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of 1,1,1-Trichloroethane test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 1.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute AWQC for 1,1,1-Trichloroethane. It is noted that the Department has not established chronic or human health AWQC for 1,1,1-Trichloroethane. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for 1,1,1-Trichloroethane. In addition, the Department conducted a statistical evaluation on air stripper *influent* test results. A discussion of this evaluation is provided in Section 6(r) of this Fact Sheet.

p. Trichloroethylene: The previous permitting action established a daily maximum concentration limit of 2.7 µg/L for trichloroethylene based on expected values in treated ground water. A review of the most recent 60 months of effluent data on file with the Department for trichloroethylene indicates that the maximum effluent value reported was 2.0 µg/L. The Department has established a minimum RL of 5.0 µg/L for trichloroethylene. On May 11, 2006, the Department conducted a statistical evaluation on the most recent 60 months of trichloroethylene test results on file with the Department for the Osram Sylvania facility in accordance with Department rule Chapter 530 Section 3.E. The 5/11/06 evaluation, which utilized the RL of 5.0 µg/L rather than the reported value of 2.0 µg/L, indicates that the discharge does not exceed or have a reasonable potential to exceed the critical acute or human health AWQC for trichloroethylene. It is noted that the Department has not established

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

chronic AWQC for trichloroethylene. Therefore, this permitting action is eliminating the daily maximum concentration limit and monitoring requirements for trichloroethylene.

q. pH: The previous permitting action established a pH range limitation of 6.0 – 8.5 standard units (SU) based on Maine Board of Environmental Protection policy regarding the certification of NPDES permits. A review of the daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period April 2002 – January 2006 indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period. The Department is making a best professional judgment determination that the pH of the water discharged to the Medomack River, considering the quantity of water discharged and the past demonstrated performance of this facility without pH adjustment is not anticipated to result in measurable changes in ambient receiving water pH. Therefore, this permitting action is eliminating the pH range limitation and monitoring requirement.

r. Vinyl chloride, 1,2,-Dichloroethene, 1,1-Dichloroethene, Trans-1,2,-Dichloroethene, cis-1,2-Dichloroethene, 1,1,1-Trichloroethane, Trichloroethene, Tetrachloroethene, Chloroform: Air stripper system *influent* concentration levels for these volatile organic compounds (VOCs) have been summarized in a report prepared for Osram Sylvania by EOS Research, Ltd. entitled, Report of Remedial System Operations 4/04-4/05 Osram Sylvania Inc. Waldoboro, Maine, July, 2005. Table 2 of the report, *Historical VOC Concentration in Extraction Wells and Air Stripper Influent*, which is included as Fact Sheet Attachment B, summarizes these data for the period of November 1996 through April 2005. These values represent the combined influent concentration from the five extraction wells prior to treatment via the air stripper system and were generated by water quality analysis performed on a once per calendar quarter basis.

On May 19, 2006, the Department conducted a statistical evaluation in accordance with Department rule Chapter 530 Section 3.E on the *influent* VOC tests results provided in the July 2005 report identified above to determine whether the untreated ground water concentrations of these VOCs extracted from the five extraction wells indicate a reasonable potential (RP) to exceed the ambient surface water quality criteria. The Department is making a best professional judgment determination in this permitting action to establish a quarterly *effluent* monitoring requirement for any parameter which indicates RP. Although the *effluent* data for these VOC parameters does not demonstrate RP, the Department is identifying in this permitting action that failure of the ground water remediation system to function properly may result in a discharge of certain VOCs in concentrations that may pose a threat to marine life or to human health by way of consumption of marine organisms affected by the discharge.

The 5/19/06 evaluation indicates that the maximum reported tetrachloroethene influent value of 660 µg/L reported for October 1999 indicates a reasonable potential to exceed the human health-based ambient water quality criterion of 1.77 µg/L. Therefore, this permitting action is establishing a daily maximum concentration reporting requirement for tetrachloroethene and a minimum monitoring frequency requirement of once per calendar quarter, consistent with the monitoring requirement established in the May 31, 1988 Administrative Order by Consent. The *effluent* values reported for tetrachloroethene do not demonstrate a RP to exceed the AWQC, therefore, numeric limitations for this pollutant are not being carried forward in this permitting action.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

The 5/19/06 influent VOC evaluation indicates that none of the other VOC compounds tested to date demonstrates a reasonable potential to exceed the critical acute, chronic or human health-based AWQC.

s. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* (toxics rule) sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, Surface *Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

The previous licensing action established WET and chemical-specific (priority pollutant) testing for the discharge of process wastewater to the Medomnak River. Osram Sylvania has ceased all manufacturing activities at its Waldoboro facility and has ceased discharge of process wastewaters. Chapter 530 Section (2)(A) specifies the dischargers subject to the rule as, *"all licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria."* Osram Sylvania does not discharge process or domestic wastewaters. Further Chapter 530 Section 2.D.4 states, *"The Department may waive or reduce testing or replace testing with requirements adequate to characterize the toxicity of identified pollutants when a discharger provides information adequate to:*

(a) Identify all toxic pollutants present or demonstrate that no toxic pollutants are used in its processes in toxic amounts;
(b) Demonstrate that chemicals used in or formed by the discharger's industrial processes are not known or suspected to result in the formation of toxic pollutants in toxic amounts; and
(c) Demonstrate the discharger does not process or treat waters known or suspected to contain toxic pollutants."

This permitting action addresses all known pollutants consistent with Section 2.D.4 of the toxics rule, and the Department has determined that routine WET, priority pollutant, or analytical chemistry testing for Outfall #006A is not warranted at this time.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Medomak River (estuary) to meet standards for Class SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Lincoln County News* newspaper on or about August 2, 2006. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

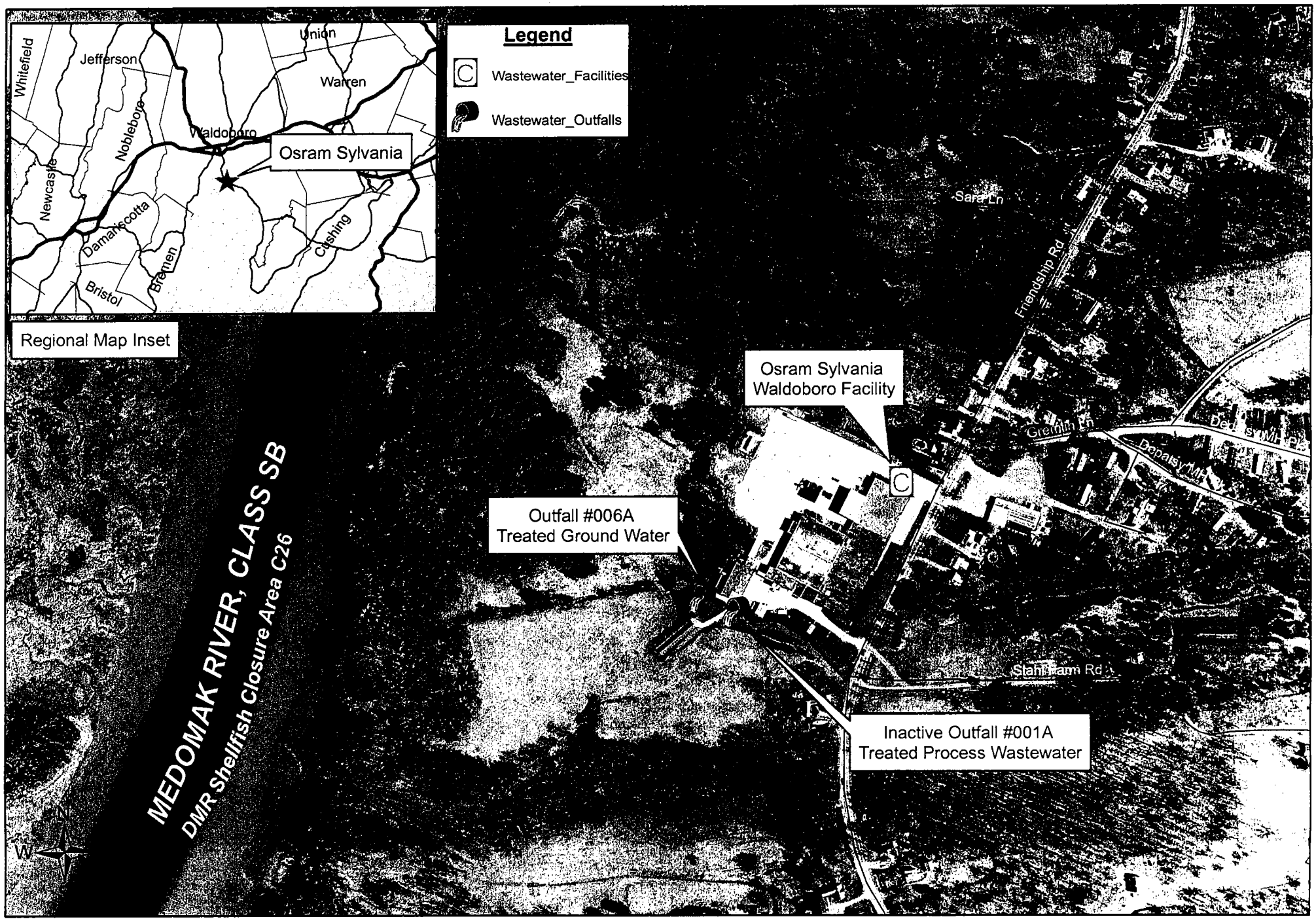
Additional information concerning this permitting action may be obtained from, and written comments sent to:

William F. Hinkel
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7659 Fax: (207) 287-7826
e-mail: bill.hinkel@maine.gov

10. RESPONSE TO COMMENTS

During the period of August 24, 2006 through September 22, 2006, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to Osram Sylvania, Inc. for the proposed discharge. During this period, the Department received no significant comments on the proposed draft permit; therefore, a response to comments was not prepared.

ATTACHMENT A



OSRAM Sylvania at Waldoboro, Maine

Map created by Maine DEP
May 12, 2006

ATTACHMENT B

Table 2. Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)

OSRAM SYLVANIA Inc.

Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	trans-1,2-Dichloro-ethene	cis-1,2-Dichloro-ethene	1,1,1-Trichloro-ethane	Trichloro-ethene	Tetrachloro-ethene	Chloroform	Total VOCs (ug/L)
INFLUENT	4-Nov-96	BDL	BDL	130	240	BDL	BDL	570	95	370	-	1405
	9-Apr-97	BDL	2	110	180	4	BDL	450	65	240	-	1050
	17-May-97	BDL	BDL	100	160	BDL	BDL	410	39	340	-	1049
	8-Oct-97	12.0	BDL	120	230	3.8	1.7	500	68	340	-	1276
	22-Jan-98	BDL	BDL	86	170	3	BDL	400	49	240	-	948
	7-Apr-98	BDL	BDL	81	170	BDL	BDL	380	47	230	-	908
	28-Jul-98	BDL	BDL	95	190	BDL	BDL	620	33	270	-	1208
	30-Oct-98	BDL	BDL	98	190	BDL	BDL	500	50	260	-	1098
	4-Feb-99	BDL	BDL	49	120	BDL	BDL	380	11	100	-	660
	14-Apr-99	BDL	2	80	170	BDL	NA	360	35	210	-	857
	14-Jul-99	BDL	BDL	110	250	BDL	NA	380	130	590	-	1460
	8-Oct-99	BDL	Tr	210	510	BDL	NA	1200	150	660	-	2730
	1-Feb-00	BDL	BDL	84	150	BDL	NA	460	24	160	-	878
	11-Apr-00	BDL	BDL	Tr	180	BDL	NA	470	Tr	260	-	910
	11-Jul-00	BDL	BDL	74	150	BDL	NA	530	52	280	-	1086
	12-Oct-00	BDL	BDL	160	350	BDL	NA	1000	76	540	-	2126
	17-Jan-01	BDL	BDL	130	290	BDL	NA	790	73	520	-	1803
	17-Apr-01	BDL	BDL	160	370	BDL	NA	880	110	440	-	1960
	16-Jul-01	<5	<2	78	160	Tr(78)	NA	390	53	290	-	971
	3-Oct-01	<5		100	230	Tr(3)	NA	670	67	340	-	1407
	23-Jan-02	<2	1.3	83	190	<1	77	480	52	210	-	1093
	25-Apr-02	<2	1.1	70	48	<1	9.1	440	9.4	86	-	664
	24-Jul-02	<2	1.7	120	150	Tr (.81)	22	710	12	120	-	1136
	17-Oct-02	<2	1.6	63	170	<1	25	710	15	180	-	1165
	7-Jan-03	<2	<1	110	150	<1	18	470	9	72	-	829
	15-Apr-03	Tr (.82)	1.4	62	170	Tr (.81)	28	440	14	46	-	761
	22-Jul-03	<2	Tr (0.98)	72	120	<1	21	440	13	110	<1	776
	10-Oct-03	<2	<1	110	160	<1	21	650	13	140	<1	1094
	6-Jan-04	<2	160	110	160	<1	24	730	12	150	<1	1346
	27-Apr-04	Tr (.52)	1.4	130	210	Tr (.55)	28	930	15	160	<1	1474
	12-Jul-04	Tr (.94)	2.2	98	190	5.9	66	750	45	370	<1	1527
	18-Oct-04	<2	3.2	82	180	5.5	67	440	63	270	Tr (0.82)	1111
	8-Feb-05	Tr(.69)	110	110	210	7.0	48	490	41	230	<1	1246
	26-Apr-05	Tr(0.55)	<1	110	230	6.8	51	510	49	280	<1	1237

BDL-Below Method Detection Limit
NS-Not Sampled
NA-Not Analyzed
Tr-Trace Compound Detected

Table 2: Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)

OSRAM SYLVANIA Inc.
Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-ethene	1,1,1-Trichloro-ethane	1,1-Dichloro-ethane	1,1,2-Trichloro-ethane	Trichloro-ethene	Tetrachloro-ethene	Chloroform	Total VOCs (ug/L)
EW-1	4-Nov-96	13	BDL	240	680	BDL	BDL	20	310	660	-	1923
	9-Apr-97	BDL	6.6	110	140	5.4	190	26	130	200	-	808
	17-Jul-97	BDL	BDL	400	890	BDL	1300	120	550	910	-	4170
	8-Oct-97	BDL	BDL	360	1200	BDL	1400	40	510	780	-	4290
	22-Jan-98	BDL	BDL	210	510	BDL	670	28	310	590	-	2318
	7-Apr-98	BDL	BDL	210	440	BDL	640	37	330	540	-	2197
	28-Jul-98	BDL	BDL	190	390	BDL	550	20	300	440	-	1890
	30-Oct-98	BDL	BDL	210	450	BDL	680	21	290	500	-	2151
	4-Feb-99	BDL	BDL	200	510	BDL	620	BDL	290	390	-	2010
	14-Apr-99	BDL	BDL	290	580	BDL	670	BDL	470	990	-	3000
	14-Jul-99	BDL	BDL	240	900	BDL	NA	BDL	370	480	-	1990
	8-Oct-99	BDL	BDL	180	520	BDL	600	14	210	640	-	2164
	1-Feb-00	BDL	BDL	220	520	BDL	580	14	330	630	-	2294
	11-Apr-00	BDL	5.7	360	980	11	1000	30	500	780	-	3667
	11-Jul-00	BDL	BDL	180	520	BDL	610	23	310	560	-	2203
	12-Oct-00	BDL	BDL	150	470	BDL	490	14	180	360	-	1664
	17-Jan-01	BDL	7.5	190	490	BDL	540	36	310	510	-	2084
	17-Apr-01	BDL	6.0	180	540	BDL	570	52	350	620	-	2318
	16-Jul-01	<5	<5	230	520	5.9	510	55	320	610	-	2251
	3-Oct-01	<50	<50	120	420	<50	460	<60	230	500	-	1730
	23-Jan-02	<2	7.6	220	680	4.2	1200	54	310	330	-	2806
	25-Apr-02	<2	5.3	220	560	6.5	620	74	340	470	-	2296
	24-Jul-02	<2	4.5	270	620	5.2	590	74	240	340	-	2144
	17-Oct-02	5.0	5.0	150	720	11	820	46	360	630	-	2747
	7-Jan-03	<2	3.9	230	620	<1	320	65	220	250	-	1709
	15-Apr-03	4.3	6.3	320	1800	16	2100	89	490	400	-	5226
	22-Jul-03	2.0	4.0	190	550	9.1	700	63	370	690	<1	2578
	10-Oct-03	Tr (1.8)	<1	190	560	7.1	640	56	320	470	1.6	2245
	6-Jan-04	4.0	7.7	250	600	16	750	91	330	510	<1	2559
	27-Apr-04	3.4	5.6	330	920	13	1100	100	460	580	<1	3512
	12-Jul-04	Tr (1.7)	7.3	240	820	10	940	120	400	1400	<1	3937
	18-Oct-04	<2	3.4	140	450	4.7	530	58	320	330	<1	1836
	8-Feb-05	3.8	9.0	140	440	23	490	42	220	320	<1	1688
	26-Apr-05	1.6	6.5	180	640	15	570	84	290	460	<1	2247

)L-Below Method Detection Limit
)-Not Sampled
\-Not Analyzed
-Trace Compound Detected

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Table 2. Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)

OSRAM SYLVANIA Inc.

Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-ethane	trans-1,2-Dichloro-ethene	cis-1,2-Dichloro-ethene	1,2,4-Trichloro-ethane	Trichloro-ethene	Tetrachloro-ethene	Chloroform	Total VOCs ug/L
EW-2	4-Nov-96	BDL	BDL	570	2100	BDL	BDL	330	740	14000	-	17740
	9-Apr-97	BDL	5.7	410	600	BDL	370	340	460	810	-	2996
	17-Jul-97	BDL	BDL	710	1700	BDL	400	600	910	9600	-	13920
	8-Oct-97	BDL	BDL	500	1500	BDL	410	260	990	3600	-	7260
	22-Jan-98	BDL	BDL	310	1000	BDL	190	140	640	5900	-	8180
	7-Apr-98	BDL	BDL	380	1100	BDL	230	230	1000	8100	-	11040
	28-Jul-98	BDL	BDL	480	1400	BDL	200	290	1500	9000	-	12870
	30-Oct-98	BDL	BDL	330	1500	BDL	200	180	1100	8900	-	12210
	4-Feb-99	BDL	BDL	320	1400	BDL	220	250	1400	8300	-	11890
	14-Apr-99	BDL	BDL	430	1400	BDL	280	240	1300	8300	-	11950
	14-Jul-99	BDL	BDL	400	1600	BDL	NA	200	1100	9800	-	13100
	8-Oct-99	BDL	BDL	140	850	BDL	180	66	620	8900	-	10756
	1-Feb-00	BDL	BDL	250	820	BDL	380	BDL	580	6000	-	8030
	11-Apr-00	BDL	BDL	240	1100	BDL	420	76	690	7100	-	9626
	11-Jul-00	BDL	BDL	420	1300	BDL	340	300	490	10000	-	12850
	12-Oct-00	BDL	BDL	370	1400	BDL	270	150	470	12000	-	14660
	17-Jan-01	BDL	BDL	340	1200	BDL	250	260	560	12000	-	14610
	17-Apr-01	BDL	BDL	220	990	BDL	210	190	460	9200	-	11270
	16-Jul-01	<100	<100	430	1600	<100	350	380	600	14000	-	17360
	3-Oct-01	<100	<100	390	1600	<100	330	360	690	13000	-	16370
	23-Jan-02	<2	10.0	470	1800	20	680	390	930	7500	-	11800
	25-Apr-02	3.3	5.0	380	590	8.1	350	390	760	7500	-	9986
	24-Jul-02	6.5	5.0	740	1900	22	390	380	1000	10000	-	14444
	17-Oct-02	9.2	4.6	560	1600	13	340	310	1100	12000	-	15937
	7-Jan-03	3.6	3.9	420	1700	11	320	320	530	8200	-	11509
	15-Apr-03	Not Sampled									-	
	22-Jul-03	3.4	4.3	320	1200	6.2	340	400	590	8400	-	11264
	10-Oct-03	3.2	3.4	410	1400	5.9	310	350	710	11000	1.7	14194
	6-Jan-04	5.7	4.4	460	1400	8.6	430	510	550	11000	<1	14369
	27-Apr-04	4.0	4.1	320	1400	7.6	510	370	530	7100	<1	10246
	12-Jul-04	5.2	9.7	290	1200	11	530	430	420	19000	<1	21896
	18-Oct-04	4.7	3.7	310	1100	6	400	360	550	5600	<1	8334
	8-Feb-05	7.6	8.4	420	1300	13	370	420	440	9900	Tr(0.49)	12879
	26-Apr-05	Tr (1.8)	6.5	220	770	12	630	120	330	1200	<1	3289

)L-Below Method Detection Limit
-Not Sampled
-Not Analyzed
Trace Compound Detected

Table 2. Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)
OSRAM SYLVANIA Inc.
Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloroethane	1,1-Dichloroethene	1,1-Dichloroethane	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene	Tetrachloroethene	Chloroform	Total VOC's (ug/L)
EW-3	4-Nov-96	BDL	BDL	740	1400	57	BDL	1600	1200	2300	-	7297
	9-Apr-97	BDL	18.0	150	160	49	130	180	180	230	-	1099
	17-Jul-97	BDL	BDL	670	1000	130	620	810	1500	1100	-	5830
	8-Oct-97	BDL	BDL	450	1400	BDL	1300	850	1100	1600	-	6700
	22-Jan-98	BDL	BDL	220	320	48	350	470	780	840	-	3028
	7-Apr-98	BDL	BDL	350	640	180	470	BDL	920	79	-	2639
	28-Jul-98	BDL	BDL	320	470	150	440	13	280	34	-	1707
	30-Oct-98	BDL	BDL	380	550	200	540	BDL	740	17	-	2427
	4-Feb-99	BDL	BDL	190	170	43	140	120	420	39	-	1122
	14-Apr-99	BDL	BDL	270	460	BDL	250	120	490	55	-	1645
	14-Jul-99	BDL	BDL	520	730	280	NA	BDL	980	68	-	2578
	8-Oct-99	BDL	BDL	210	640	93	220	60	930	480	-	2633
	1-Feb-00	BDL	BDL	350	730	42	300	360	830	1300	-	3912
	11-Apr-00	BDL	BDL	480	940	85	190	960	890	1800	-	5345
	11-Jul-00	BDL	6.4	670	1300	90	240	2100	920	2100	-	7426
	12-Oct-00	6.4	BDL	740	1100	160	280	1000	1000	100	-	4386
	17-Jan-01	BDL	6.3	600	1200	73	180	2000	850	1500	-	6409
	17-Apr-01	BDL	BDL	510	1100	62	150	1800	740	1400	-	5762
	16-Jul-01	<5	8.2	640	1200	98	220	2000	760	1500	-	6426
	3-Oct-01	<5	<5	660	1300	130	280	1700	900	1600	-	6570
	23-Jan-02	<2	18.0	620	1400	110	490	1800	710	810	-	5958
	25-Apr-02	3.3	6.1	450	1100	52	370	1100	550	2900	-	6531
	24-Jul-02	3.9	4.9	480	1100	13	440	420	660	5000	-	8122
	17-Oct-02	8.3	4.5	210	1300	15	650	210	660	5800	-	8858
	7-Jan-03	4.6	5.7	700	1400	130	260	1900	400	960	-	5763
	15-Apr-03	5.0	2.0	340	830	220	290	350	780	590	-	3412
	22-Jul-03	4.6	5.5	400	850	89	370	1200	550	2000	(Tr)0.54	5473
	10-Oct-03	4.8	4.9	540	1200	120	240	1800	600	1400	2.4	5917
	6-Jan-04	5.8	6.0	610	1300	150	300	2200	620	1900	0.89	7096
	27-Apr-04	4.4	4.6	490	1300	92	470	1600	570	3500	(Tr)0.48	8033
	12-Jul-04	5.3	9.1	490	1400	100	450	1500	670	16000	<1	20627
	18-Oct-04	4.1	6.2	370	920	74	330	880	520	2400	<1	5506
	8-Feb-05	8.3	7.2	470	1000	200	240	1100	710	2200	(Tr)0.71	5946
	26-Apr-05	3.3	<1	410	1200	59	270	770	460	16000	<1	19172

-Below Method Detection Limit
lot Sampled
Not Analyzed
race Compound Detected

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Table 2. Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)

OSRAM SYLVANIA Inc.

Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-ethane	trans-1,2-Dichloro-ethene	cis-1,2-Dichloro-ethene	1,1,1-Trichloro-ethane	Trichloro-ethene	Tetrachloro-ethene	Chloroform	Total VOCs (ug/L)
EW-4	4-Nov-96	BDL	BDL	370	370	14	BDL	290	190	170	-	1404
	9-Apr-97	BDL	7.2	110	120	7	36	130	96	130	-	636
	17-Jul-97	BDL	BDL	300	790	BDL	490	210	410	3200	-	5400
	8-Oct-97	BDL	BDL	690	770	81	230	550	720	290	-	3331
	22-Jan-98	BDL	BDL	460	540	49	150	470	390	190	-	2249
	7-Apr-98	7.2	BDL	470	520	44	150	610	270	200	-	2271
	28-Jul-98	BDL	BDL	400	560	20	96	570	140	180	-	1966
	30-Oct-98	BDL	BDL	400	490	22	110	420	140	150	-	1732
	4-Feb-99	BDL	BDL	460	580	BDL	110	630	190	190	-	2160
	14-Apr-99	BDL	BDL	360	550	BDL	BDL	600	170	240	-	1920
	14-Jul-99	BDL	BDL	450	580	82	BDL	350	270	120	-	1852
	8-Oct-99	BDL	BDL	340	490	17	74	240	110	120	-	1391
	1-Feb-00	BDL	BDL	440	610	28	91	170	460	440	-	2239
	11-Apr-00	BDL	BDL	260	230	20	63	170	98	110	-	951
	11-Jul-00	BDL	BDL	360	370	10	48	360	95	190	-	1433
	12-Oct-00	BDL	BDL	370	290	17	63	230	100	150	-	1220
	17-Jan-01	BDL	BDL	310	370	8.3	35	340	77	150	-	1290
	17-Apr-01	BDL	BDL	290	400	6	32	390	69	160	-	1347
	16-Jul-01	<5	<5	350	440	11	39	460	79	220	-	1599
	3-Oct-01	<5	<5	380	500	21	67	540	120	220	-	1848
	23-Jan-02	<2	5.1	330	410	18	72	360	74	130	-	1399
	25-Apr-02	2.0	3.4	300	200	9.1	44	460	71	200	-	1290
	24-Jul-02	2.6	3.0	490	640	32	58	870	110	260	-	2466
	17-Oct-02	3.1	2.5	540	420	29	70	400	120	180	-	1765
	7-Jan-03	2.5	3.9	460	620	17	51	500	68	130	-	1856
	15-Apr-03	2.8	<1	300	660	33	69	440	140	110	-	1761
	22-Jul-03	3.1	4.1	370	440	19	47	570	84	270	0.57	1812
	10-Oct-03	2.6	2.9	420	570	17	48	670	79	190	2.3	2007
	6-Jan-04	2.9	<1	400	600	13	47	730	80	260	<1	2136
	27-Apr-04	2.6	3.2	470	730	19	59	1000	120	280	Tr (0.4)	2684
	12-Jul-04	6.4	<1	440	840	31	58	1200	110	1300	<1	3985
	18-Oct-04	3.2	5.2	280	810	27	350	460	390	2500	<1	4825
	8-Feb-05	5.8	6.6	370	590	56	52	640	110	330	Tr (0.73)	2160
	26-Apr-05	Tr(1.4)	<1	420	780	13	39	830	86	350	<1	2518

DL-Below Method Detection Limit
IS-Not Sampled
IA-Not Analyzed
r-Trace Compound Detected

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Table 2. Historical VOC Concentrations in Extraction Wells and Air Stripper Influent (ug/L)

OSRAM SYLVANIA Inc.
Waldoboro, Maine

Well Number	Date	Vinyl Chloride	1,2-Dichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	trans-1,2-Dichloro-ethene	cis-1,2-Dichloro-ethene	1,1,1-Trichloro-ethane	Trichloro-ethene	Tetrachloro-ethene	Chloroform	Total VOC's (ug/L)
MW-3	4-Nov-96	BDL	BDL	63	120	BDL	BDL	420	18	130	-	751
	9-Apr-97	BDL	5.2	75	91	BDL	28	140	17	120	-	476
	17-Jul-97	BDL	BDL	BDL	68	BDL	BDL	170	BDL	31	-	269
	8-Oct-97	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	
	22-Jan-98	BDL	BDL	65	130	BDL	28	560	BDL	110	-	893
	7-Apr-98	BDL	BDL	15	40	BDL	4.5	110	4.4	33	-	207
	28-Jul-98	BDL	BDL	28	69	BDL	6	230	6.7	58	-	398
	30-Oct-98	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	
	4-Feb-99	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	
	14-Apr-99	BDL	BDL	BDL	46	BDL	BDL	75	BDL	41	-	162
	14-Jul-99	BDL	BDL	16	85	BDL	NA	120	BDL	42	-	263
	8-Oct-99	BDL	BDL	8.7	33	BDL	BDL	36	3.3	17	-	98
	1-Feb-00	BDL	BDL	29	96	BDL	9	190	9.9	76	-	410
	11-Apr-00	BDL	BDL	8.5	66	BDL	1.4	100	4.5	33	-	213
	11-Jul-00	BDL	BDL	28	82	BDL	6.8	210	6	68	-	401
	12-Oct-00	BDL	BDL	24	89	BDL	8	160	5.4	55	-	341
	17-Jan-01	BDL	BDL	11	76	BDL	2.2	140	4.3	54	-	288
	17-Apr-01	BDL	BDL	13	63	BDL	2.5	140	3.8	46	-	268
	16-Jul-01	<0.50	<0.50	21	90	<0.50	5.5	190	5.1	70	-	382
	3-Oct-01	<0.50	<0.50	43	150	<0.50	6.6	270(E)	8.9	100	-	309
	23-Jan-02	<2	<1	21	86	<1	2	180	5	31	-	325
	25-Apr-02	<2	<1	14	31	<1	1	94	3.1	26	-	169
	24-Jul-02	<2	<1	22	100	<1	1	150	4	30	-	307
	17-Oct-02	<2	<1	13	130	<1	<1	180	7.2	40	-	370
	7-Jan-03	<2	<1	16	93	<1	<1	91	2.6	15	-	218
	15-Apr-03	<2	<1	16	120	<1	1.6	170	6.8	32	-	346
	22-Jul-03	<2	<1	11	53	<1	Tr (0.56)	90	3	24	<1	181
	10-Oct-03	<2	<1	17	110	<1	<1	160	4.4	32	Tr (0.92)	323
	6-Jan-04	<2	<1	9	52	<1	<1	100	2.1	17	<1	180
	27-Apr-04	<2	<1	11	66	<1	Tr (0.43)	110	2.8	18	<1	208
	12-Jul-04	<2	1.0	74	190	<1	17	780	10	500	<1	1572
	18-Oct-04	<2	4.1	88	150	<1	34	600	22	100	Tr(0.81)	998
	8-Feb-05	<2	1.1	110	170	<1	20	620	14	120	<1	1055
	26-Apr-05	<2	Tr(0.98)	89	140	<1	17	530	9.7	100	<1	886

BDL-Below Method Detection Limit
NS-Not Sampled
NA-Not Analyzed
Tr-Trace Compound Detected