



2019

COMPLIANCE AUDIT REPORT

ENVIRONMENTAL MANAGEMENT ACT

SECONDARY WOOD PROCESSING INDUSTRY



EXECUTIVE SUMMARY

The B.C. Ministry of Environment and Climate Change Strategy (ENV) conducted a sector-wide compliance audit between May 7 and November 8, 2019 on select secondary wood processing (SWP) facilities within the province of British Columbia (B.C.) to determine their level of compliance with the *Environmental Management Act* (EMA) administered by the Ministry of Environment and Climate Change Strategy (ENV). Findings of the Secondary Wood Processing Industry Audit (SWPI Audit) will serve to identify compliance rates across the sector, guide strategies to improve compliance with legislative requirements, and inform regulatory improvement initiatives to ensure the protection of human health and the environment.

According to the EMA and the Waste Discharge Regulation (WDR), the SWP industry is a prescribed activity/operation; therefore, facilities require a site-specific authorization/permit to discharge waste into the environment. Thirty-one SWP facilities out of a total of 41 SWP facilities in B.C. with active waste authorizations under ENV were included in the SWPI Audit – all possess site-specific permits to discharge air emissions.

Inspections consisted of evaluating whether the facility was compliant with their discharge permit, and where appropriate, the Hazardous Waste Regulation (HWR) on a section-by-section basis. This was achieved via office reviews of authorization information and any required documents, reports or data submissions (dating between 2017 and 2020), and on-site walkthroughs to verify facility and operational details and review monitoring records and maintenance logs. The inspection results were compiled and analyzed to determine compliance rates.

Fifty-seven inspection records were generated following inspections of the 31 facilities included in the SWPI Audit; 31 records for inspections against permit requirements, four records for inspections against EMA for unauthorized discharges, and 22 records for inspections against the HWR at select sites. In total, ENV issued 10 notices of compliance (nine from permit inspections, and one from an HWR inspection), 35 advisories, 10 warnings and two referrals for administrative monetary penalties.

The inspections of 31 facilities for the SWPI Audit comprised a total of 706 evaluations of individual site-specific permit clauses. When facilities were evaluated for requirements for which compliance was applicable at the time of the inspection (578 evaluations), facilities were compliant in 59 percent of evaluations of applicable requirements.

With respect to individual facility compliance performance, 17 of the 31 inspected facilities had non-compliance rates between zero to ten percent of all evaluations of compliance with the clauses in each of their individual permits.

Key findings are limited to compliance evaluations of clauses deemed applicable to the facilities at the time of the inspection:

ENV confirmed that 27 percent of evaluated facilities were adhering to discharge rate limits but could not determine compliance for 66 percent of evaluated facilities due to the lack of monitoring requirements. ENV determined that 81 percent of evaluated facilities discharged air emissions only within the permitted discharge periods, while ten percent of evaluated facilities exceeded the allowable discharge period. Compliance with discharge rate limits and discharge periods were not applicable for the respective remaining seven and nine percent of facilities due to decommissioning of works or lack of discharge.

ENV determined that 13 percent of evaluated facilities met their discharge quality standards while six percent of evaluated facilities exceeded particulate matter concentration limits, but ENV could not confirm compliance for 75 percent of evaluated facilities due to lack of quantitative monitoring requirements. Compliance with the requirement was not applicable for the remaining six percent of evaluated facilities at the time of inspection.

Of the evaluated facilities with monitoring requirements, ENV confirmed that 62 percent conducted monitoring and data collection as required, while 23 percent of evaluated facilities failed to do so. Fifty-three percent of evaluated facilities submitted reports and data submission as required, while 28 percent of evaluated facilities submitted reports that were late and/or deficient in required data.

ENV determined that 64 percent of evaluated facilities performed required operational practices, inspections and/or maintenance of works while 23 percent of evaluated facilities failed to conduct full inspections or maintenance of all authorized works as required. ENV confirmed that 69 percent of evaluated facilities fulfilled their fugitive emission management requirements while 11 percent of evaluated facilities were out of compliance due to failure to prepare or update emission management plans as required. Eight permits included in this Audit contained requirements regarding the disposal of waste materials; half of the facilities were compliant with these requirements.

ENV verified that the authorized works at 85 percent of evaluated facilities were present as described in their permits; however, authorized works were missing, replaced with unauthorized substitutions, or not operational during discharge in ten percent of evaluated facilities.

ENV determined that unapproved bypasses did not occur in 89 percent of evaluated facilities while unapproved bypasses occurred at seven percent of facilities. ENV determined that emergencies/non-compliances did not occur or were addressed as required at 79 percent of evaluated facilities. However, 21 percent of evaluated facilities were out of compliance largely due to failure to provide timely notification of the incident to ENV; other reasons include failure to submit required follow-up reports, and failure to conduct required re-testing.

Seven percent of evaluated facilities failed to notify ENV of changes to processes and operations as well as administrative details.

Twenty-two facilities were evaluated for one or more of the following HWR requirements: Sections 16(1)(a), 16(1)(b), 17(1)(b), 43(1), 45.1(2)(c)(i), 46(4), 46(5), 46(8.1), 46(9), 50(3)(a), 50(3)(b), 50(3)(c), and 50(8). Non-compliance was determined for all evaluated sections, except for Sections 16(1)(a), 46(4), 46(5), and 50(8), due to improper storage of hazardous waste (lack of secure containment and labelling) and inadequate records management.

Findings from the 2019 SWPI Audit have highlighted opportunities of improvement for the SWP sector and ENV. Facility owner/operators are reminded to ensure that facility staff is aware of and comply with all permit requirements as well as HWR requirements. Authorized air discharges must meet specified discharge quality standards (e.g. particulate matter concentration limits) and occur within allowable discharge periods. Monitoring must be conducted as required, and reports submitted on time and complete with required information. Emission management plans must be prepared and updated as required. Routine inspections and upkeep of authorized works must be conducted as required. Authorized works must be complete and fully operational during discharge, with no unauthorized substitutions. Bypasses of authorized works are prohibited unless prior approval from ENV is obtained. ENV must be notified in advance of any modifications to discharge processes and infrastructure, as well as changes to ownership and permittee names or administrative details. Timely notification of any incidents or emergencies must be provided to ENV as required, with re-testing conducted and follow-up reports submitted as

required. Hazardous waste must be managed accordingly with HWR requirements, such as proper container labelling and storage conditions and proper records management.

In the interests of allowing for timely evaluation of performance in mitigating impacts to human health and the environment, ENV is recommended to consider reviewing permits for enforceability and adding quantitative requirements for routine monitoring of discharge quantity/rate and discharge quality and reporting if absent from permits. The high rates of non-compliance with sections of the HWR show that there is an opportunity for ENV to conduct outreach and promotional work on how to comply with the HWR as a small generator; promotional initiatives could also include informing sites on reporting methods (e.g. use of the Routine Environmental Reporting Submission mailbox, non-compliance reporting mailbox, and submission of amendment requests, etc.)

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LIST OF ABBREVIATIONS USED

| Acronym | Definition |
|---------|--|
| EMA | <i>Environmental Management Act</i> |
| ENV | B.C. Ministry of Environment and Climate Change Strategy |
| HWR | Hazardous Waste Regulation |
| SWP | Secondary Wood Processing |
| SWPI | Secondary Wood Processing Industry |
| WDR | Waste Discharge Regulation |

INTRODUCTION

PURPOSE OF THIS REPORT

This report presents the findings of a sector-wide compliance audit conducted between May 7 and November 8, 2019 on select secondary wood processing (SWP) facilities within the province of British Columbia (B.C.) to determine their level of compliance with the *Environmental Management Act* (EMA) administered by the Ministry of Environment and Climate Change Strategy (ENV).

Findings of the Secondary Wood Processing Industry Audit (SWPI Audit) will serve to identify compliance rates across the sector, guide strategies to improve compliance with legislative requirements, and inform regulatory improvement initiatives to ensure the protection of human health and the environment. ENV expects that the SWP industry sector will use the report to identify and address compliance areas of improvement not only for individual operations, but also across the overall sector.

ABOUT THE INDUSTRY SECTOR

SELECTION

Industry sectors targeted by the ENV's annual audit program are selected based on their inclusion in the Waste Discharge Regulation (WDR), as well as existing policy and direction such as the Environmental Protection Division's Inspection Policy and the 2018 Ministry Service Plan.

DESCRIPTION

In 2016, the Canadian Forest Service conducted its seventh survey of the secondary wood manufacturing sector in B.C. and estimated that there are 680 firms in B.C. that produce remanufactured products, millwork, engineered wood products (including log homes and timber frames), cabinets, furniture, pallets and containers, shakes and shingles, panelboards, and other wood products, generating \$4.46 billion in sales and employing an estimated 16,888 full-time equivalent workers. These products are most commonly used in building (e.g. commercial and residential construction and renovation) and industrial sectors. The secondary manufacturing of lumber into intermediate and finished products add value to waste streams from primary industries and provide economic diversification for communities in regions producing commodity forest products.¹

Note that the secondary wood processing industry as defined by the B.C. Waste Discharge Regulation does not capture all of the secondary wood manufacturing activities included in the Canadian Forest

¹ Wong, L., Stennes, B., and Bogdanski, B. E. C. 2019. Secondary manufacturing of solid wood products in British Columbia 2016: Structure, economic contribution and changes since 1990. Accessed at <<https://cfs.nrcan.gc.ca/publications/download-pdf/39736>>.

Service's survey and so only a select portion of the 680 estimated firms fall under the purview of this Audit.

REGULATORY OVERSIGHT

The EMA and the WDR are the principal pieces of legislation that protect soil, air and water quality in British Columbia. Under this legislation, the introduction of waste into the environment from identified "prescribed" industries, trades, businesses, operations, and activities requires authorization from ENV.

Secondary Wood Processing Industry is a prescribed activity/operation listed under Schedule 2 of the WDR and included in Section 6(2) of EMA. Therefore, SWP facilities require a site-specific authorization/permit to discharge waste into the environment.

The SWP industry as defined under WDR are:

"establishments, except home-based businesses, educational facilities and establishments of hobbyists or artisans, engaged in manufacturing wood or millwork products, including, but not limited to, finger-jointing products, prefabricated buildings, furniture, chopsticks and pellets"

These operations generally handle and process products from primary or other secondary wood manufacturing industries. Examples may include planer mills, finger jointing operations, timber framing industry, remanufacturing plants, and the production of cabinets, doors, windows, sashes, chopsticks, pellets, furniture, prefabricated buildings, trusses or pre-formed fuel logs, or wood siding. It should be noted that these examples may be classified as either primary or secondary wood processing industry depending on whether round wood or already sawn wood is handled.

Examples do not include educational facilities, hobbyists, and artisans, on-site building and installation of secondary products, "burning or incineration of wood residue", "veneer and plywood industry", and "particle and wafer board industry" as defined in Schedule 1, "primary wood processing industry" as defined in Schedule 2, and landfilling operations associated with SWP industries, business, and activities which may be covered under the "industrial non-hazardous waste landfill" as defined in Schedule 2.

Home-based business, educational facilities, hobbyists, or artisans are as defined in the Waste Discharge Regulation Implementation Guide (Version Date: September 10, 2007):

| | |
|----------------------|--|
| Artisan | a trained or skilled person who creates an object or performs a task that has aesthetic value and who, generally in a small business, produces arts and crafts for retail or wholesale trade |
| Home-based Business | a small business that operates from a (residential) home base including a family farm |
| Hobbyist | a person who conducts a pursuit outside of their regular occupation for recreation without expectation of commercial benefit |
| Educational Facility | a facility where teachers provide academic or practical education to students |

In addition to authorization under permits, SWP facilities often generate and store hazardous wastes on site, such as waste oil or waste hydraulic fluid. The Hazardous Waste Regulation (HWR) addresses the proper handling and disposal of hazardous wastes, under the EMA. In the event of a spill at an authorized secondary wood processing facility, authorization holders may also be required to report spills in accordance with the Spill Reporting Regulation.

DESCRIPTION OF THE AUDITED PREMISES

There are a total of 41 facilities conducting secondary wood processing as defined in the WDR with active waste discharge authorizations in the province of B.C. Thirty-one SWP facilities (comprising a sample size of 75 percent of the total number of SWP facilities with active waste authorizations under ENV) were included in the SWPI Audit. All 31 facilities have site-specific permits to discharge air emissions from SWP operations such as pellet plants, remanufacturing plants, finger jointing, and manufacturing of other wood products.

The SWP facilities included in this Audit, the inspection record numbers for inspections conducted against their permit and the HWR, their respective waste discharge authorization numbers, their locations, and description of their facility operations are as listed in Table 1.

Table 1. Facilities Inspected for the SWPI Audit

| Authorization Number | Permittee | Location | Inspection Records | | | Facility Description |
|----------------------|---|---------------|--------------------|--------|--------|--|
| | | | Permit | HWR | EMA | |
| 1907 | Pinnacle Renewable Energy Inc. | Armstrong | 127160 | 130463 | - | Pellet plant |
| 4096 | Pacific Pallet Ltd. | Abbotsford | 127130 | 128418 | - | Pallet manufacturer |
| 8074 | Dollar Saver Lumber Ltd. | Prince George | 140996 | 142516 | - | Remanufacturing plant |
| 8109 | Masonite International Corporation | Chilliwack | 126889 | 130360 | - | Wood door manufacturer |
| 8172 | Lyle Forest Products Ltd. | Chilliwack | 139079 | - | - | Remanufacturing plant |
| 8174 | Gillwood Remanufacturing Inc. | Chilliwack | 139081 | 141422 | - | Remanufacturing plant |
| 8266 | Visscher Lumber Inc. | Chilliwack | 139082 | 141421 | - | Remanufacturing plant |
| 9094 | Woodtone Specialties Inc. | Armstrong | 133867 | 134351 | 134681 | Finger joint and laminated wood product manufacturer |
| 10606 | Northwood Wood Preservers Ltd. doing business as Vanderhoof Specialty Wood Products | Vanderhoof | 141000 | 142210 | - | Remanufacturing plant |
| 10656 | Westree Custom Cedar Products Inc. | Abbotsford | 136824 | - | - | Remanufacturing plant |
| 10660 | Quadra Wood Products Ltd. | Abbotsford | 133622 | 133912 | 133630 | Remanufacturing plant |
| 12592 | East Fraser Fibre Co. Ltd. | Quesnel | 134180 | 134233 | - | Remanufacturing plant |
| 13278 | Wide Plank Hardwood Inc. | Chilliwack | 139099 | - | - | Remanufacturing plant |
| 15749 | D&D Pallet Ltd. | Abbotsford | 131862 | - | - | Pallet manufacturer |
| 16047 | Mirax Lumber Products Ltd. | Abbotsford | 127133 | 130325 | - | Remanufacturing plant |
| 16502 | Premium Pellet Ltd. | Vanderhoof | 139939 | 139534 | - | Pellet plant |
| 16522 | C & C Wood Products Ltd. | Quesnel | 125367 | - | - | Wood product panel manufacturing mill |
| 16523 | C & C Wood Products Ltd. | Quesnel | 125347 | 126042 | 126040 | Finger-jointing manufacturing mill |
| 17530 | Glen Valley Lumber Ltd. | Chilliwack | 139080 | - | - | Remanufacturing plant |
| 17557 | Pinnacle Renewable Energy Inc. | Williams Lake | 134459 | 135496 | - | Pellet plant |
| 17802 | Buff Lumber Ltd. | Westwold | 140466 | 140946 | 140943 | Sawmill |
| 18096 | 428801 BC Ltd. doing business as Hyde Sawmill | Malakwa | 140467 | 141012 | - | Sawmill |

| Authorization Number | Permittee | Location | Inspection Records | | | Facility Description |
|----------------------|---|---------------|--------------------|--------|-----|---------------------------|
| | | | Permit | HWR | EMA | |
| 18312 | Pacific Bioenergy Prince George Limited Partnership | Prince George | 140999 | 144330 | - | Pellet plant |
| 100229 | Pinnacle Renewable Energy Inc. | Strathnaver | 125200 | 127403 | - | Pellet plant |
| 104133 | Pinnacle Renewable Energy Inc. | Burns Lake | 140800 | - | - | Pellet plant |
| 105330 | Canfor Energy North GP Ltd. | Chetwynd | 128739 | - | - | Pellet plant |
| 105808 | East Fraser Fibre Co. Ltd. | Prince George | 140993 | 141128 | - | Finger joint manufacturer |
| 107227 | Structurlam Mass Timber Corporation | Oliver | 127641 | 128926 | - | Rig mats manufacturer |
| 107369 | Pinnacle Renewable Energy Inc. | Lavington | 131071 | 133946 | - | Pellet plant |
| 108379 | Parallel Wood Products Ltd. | Williams Lake | 134428 | 134619 | - | Finger jointing facility |
| 109209 | Skeena Bioenergy Ltd. | Terrace | 141238 | - | - | Pellet plant |

POTENTIAL ENVIRONMENTAL ISSUES AND KEY METHODS OF POLLUTION CONTROL

The discharges of contaminants of concern from SWP facilities vary with processes and products. Typical discharges include air emissions and fugitive dust from cyclones, baghouses, heat recovery systems, mills, dryers, spray booths, kilns, and boilers, etc.; effluent from kilns and runoff from chip or waste piles; and, solid wastes such as combustion residue (ash), wood waste, glue wastes, etc.

Environmental and human health protection concerns associated with air discharges from secondary wood processing facilities includes particulate matter, condensable organics, volatile organic compounds, nitrogen oxides, sulphur oxides, carbon monoxide and odours. Concerns associated with refuse discharges include leachate generation, groundwater contamination, odours and fugitive dust. Concerns associated with effluent discharges include surface water and groundwater contamination.

Pollution control methods include pollution control works such as baghouses, cyclones, wet venturi scrubbers, and wet electrostatic precipitators, and water wash systems or dry filter systems for spray booths, as well as best management practices for dust suppression, spray containment, proper residue storage practices, and proper burning timing and techniques.

SWPI AUDIT METHODOLOGY

PRE-AUDIT ACTIVITIES

ENV regional compliance officers were responsible for scheduling and coordinating on-site inspections.

INSPECTIONS

Inspections included office reviews and on-site visits.

OFFICE REVIEW / DESKTOP INSPECTION

ENV reviewed office records required for each facility that was inspected in the SWPI Audit. The office review included authorization information within ENV's Authorization Management System (AMS) database and any other documents, reports, or data submissions required under their permits between January 2017 and January 2020. The office review also may have included direct communication with the authorization holder to ask questions as needed to gather additional information necessary to complete the inspection.

ON-SITE INSPECTION

ENV conducted on-site inspections on all facilities inspected in the SWPI Audit. During each on-site inspection, ENV conducted a walkthrough of the site to verify facility and operational details and review monitoring records and maintenance logs. Site personnel were questioned on site history and operation details as necessary in order to verify permit compliance. Photographs of the authorized works and discharges were taken as necessary.

Additionally, the waste handling, storage, transportation and disposal activities of facilities were also inspected against the HWR where appropriate.

INSPECTION RESULTS REPORTING

Inspections consisted of evaluating whether the authorization holder was compliant, on a clause-by-clause basis, with their discharge permit and, for select sites, sections of the HWR. Compliance findings for each section were one of four outcomes:

| | |
|----------------|---|
| In | ENV determined that the authorization holder is in compliance with the regulatory requirement at the time of the inspection |
| Out | ENV determined that the authorization holder is out of compliance with the regulatory requirement at the time of the inspection |
| Not determined | There was not enough information for ENV to determine whether the authorization holder is in compliance with the regulatory requirement at the time of the inspection |

| | |
|----------------|--|
| Not applicable | Compliance with the regulatory requirement did not apply to the authorization holder at the time of the inspection |
|----------------|--|

ENV determined the appropriate administrative response based on the compliance verification findings of the inspection using the non-compliance decision matrix contained in ENV's Compliance and Enforcement Policy and Procedure². A detailed description of some common administrative responses is included below:

| | |
|---------------------------------|--|
| Notice | A notice of compliance is a written confirmation that ENV determined that the authorization holder is in compliance with all of the regulatory requirements evaluated at the time of the inspection |
| Advisory | An advisory notifies the non-compliant party in writing that they are not in compliance with a specific regulatory requirement and often recommends a course of action that is expected to achieve compliance. An advisory is often the first enforcement response taken in cases of minor to moderate non-compliance when there is a high likelihood of achieving compliance. |
| Warning | Similar to an advisory, a warning notifies the non-compliant party in writing that they are not in compliance with a specific regulatory requirement; however, the warning differs from an advisory in that it warns of the possibility of an escalating response should non-compliance continue. Warnings are generally used when it is determined that an exchange of information alone would not be sufficient in achieving compliance. |
| Administrative Monetary Penalty | An administrative monetary penalty is a financial penalty up to \$75,000 imposed by a ministry Statutory Decision Maker on a non-compliant party in accordance with legislation. |

The response of a notice of compliance is only issued if none of the assessed sections are found to be out of compliance. If a single non-compliance was found during an inspection, the minimum compliance response is an advisory, regardless of how many sections were compliant or how minor the non-compliance.

All administrative responses to non-compliances serve as a formal record of the alleged non-compliance and form an important element of the compliance history of the party in question. Other responses such as orders, administrative sanctions, etc., within ENV's enforcement toolkit can be found in ENV's Compliance and Enforcement Policy and Procedure.

The results of each inspection, along with the administrative responses, were summarized in an inspection record, a copy of which was provided to the authorization holder.

DATA ANALYSIS

² B.C. Ministry of Environment and Climate Change Strategy. May 2014. Compliance and Enforcement Policy and Procedure, Version 3. Accessed at <https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/reporting/reporting-documents/environmental-enforcement-docs/ce_policy_and_procedure_2018.pdf>.

ENV compiled the results of the inspections for each of the 31 facilities included in the SWPI Audit to determine compliance rates with the requirements of their site-specific permits, the HWR, and EMA and identify opportunities for improvement.

Data analysis was performed separately for inspections conducted against permits, HWR, and EMA.

Compliance evaluation findings for each individual permit clause were tallied and aggregated to obtain statistics on sector performance in different compliance categories (such as compliance with discharge quantity and quality requirements, compliance with maintaining authorized works, etc.). Each facility was given equal weight when tallying sector performance results for a compliance category; therefore, if more than one clause evaluation for a compliance category was conducted for a facility, the weights given to each of those facility's multiple evaluations summed up to one for that compliance category. This is to ensure that the sector performance is reflective of all facilities and not disproportionately impacted by facilities with multiple requirements. For example, if a facility had a permit with four requirements related to discharge quantity, the compliance findings on each requirement will be given a fractional weight (one-quarter) when the results are tallied to evaluate sector performance for the compliance category of discharge quantity. Results are therefore often presented as equivalent percentages of facilities.

SUMMARY OF FINDINGS

Fifty-seven inspection records were generated following inspections of the 31 facilities included in the SWPI Audit; 31 records for inspections against permit requirements, four records for inspections against EMA for unauthorized discharges, and 22 records for inspections against the HWR at select sites.

Table 2 details the compliance outcomes of the inspections conducted for the SWPI Audit.

Table 2. Tally of Compliance Outcomes for SWPI Audit Inspections

| Compliance Response | Number of Responses Issued for Inspections Against Permit | Percentage of Responses Issued for Inspections Against Permit | Number of Responses Issued for Inspections on Unauthorized Discharges | Percentage of Responses Issued for Inspections on Unauthorized Discharges | Number of Responses Issued for Inspections Against HWR | Percentage of Responses Issued for Inspections Against HWR | Total |
|---------------------------------|---|---|---|---|--|--|-------|
| Notice of Compliance | 9 | 29 % | 0 | 0 % | 1 | 5 % | 10 |
| Advisory | 15 | 48 % | 0 | 0 % | 20 | 91 % | 35 |
| Warning | 6 | 19 % | 3 | 75 % | 1 | 5 % | 10 |
| Administrative Penalty Referral | 1 | 3 % | 1 | 25 % | 0 | 0 % | 2 |
| Total | 31 | | 4 | | 22 | | 57 |

Twenty-nine percent of authorized SWP facilities in the Audit were found to be compliant with their permits and were issued notices of compliance.

Unauthorized discharges were identified at four authorized facilities during the course of inspection, and all four facilities were found to be out of compliance with EMA Section 6(2).

Twenty-two SWP facilities were inspected against the HWR and one was determined to be compliant with all inspected HWR requirements.

In total, ENV issued 35 advisories, 10 warnings and two referrals for administrative monetary penalties for non-compliances that were administrative deficiencies or considered to pose, at most, minor temporary impacts to environment, human health, or safety (Levels 1 or 2 ratings of impact based on ENV's Compliance Decision Making Matrix in ENV's Compliance and Enforcement Policy and Procedure³).

The inspections of 31 facilities for the SWPI Audit comprised a total of 706 evaluations of individual site-specific permit clauses. In 339 of the 706 evaluations (48 percent), the facility was determined to be complying with the evaluated permit requirement. Facilities were determined to be non-compliant in 11 percent of clause evaluations. Compliance could not be determined in 23 percent of overall evaluations,

³BC Ministry of Environment and Climate Change Strategy. How Compliance Is Assessed. Accessed at < <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resource-law-enforcement/environmental-compliance/how-compliance-is-assessed> >

and compliance with the evaluated permit requirement was deemed not applicable at the time of the inspection in 18 percent of evaluations (128 evaluations).

When facilities were evaluated for requirements for which compliance was applicable at the time of the inspection (578 evaluations), facilities were compliant in 59 percent of evaluations of applicable requirements. Table 3 illustrates the overall compliance findings for overall aggregated clause evaluations in the SWPI Audit.

Table 3. Overall Compliance with Permit Clauses Evaluated in the SWPI Audit

| Compliance Findings | | Tally of All Evaluations of Permit Clauses in the Audit | Percentage of All Evaluations of Permit Clauses in the Audit | Percentage of All Evaluations of Applicable Permit Clauses in the Audit |
|--|----------------------------------|---|--|---|
| Compliance with clause is applicable at the time of inspection | In Compliance | 339 | 48 % | 59 % |
| | Out of Compliance | 80 | 11 % | 14 % |
| | Compliance Not Determined | 159 | 23 % | 28 % |
| | Subtotal | 578 | 82 % | 100 % |
| Compliance with clause not applicable at the time of inspection | | 128 | 18 % | - |
| Total | | 706 | - | - |

Individual facility performance was also evaluated with regards to the frequency of non-compliance findings determined during each of their site inspections. ENV did not find any non-compliances during inspections of nine facilities. Eight facilities have non-compliance rates between one to ten percent of all evaluations of compliance with the clauses in each of their individual permits. Table 4 illustrates the number and percentage of facilities categorized by rates of non-compliances determined during each of their individual inspections.

Table 4. Number of Facilities Categorized by Frequency of Non-Compliances Determined During Inspections

| Non-Compliance Rate per Facility Inspection | Tally of Facilities | Percentage of Facilities |
|---|---------------------|--------------------------|
| 0 % | 9 | 29 % |
| 1 to 10 % | 8 | 26 % |
| 11 to 30 % | 8 | 26 % |
| 31 to 50 % | 5 | 16 % |
| 51 to 67 % | 1 | 3 % |

The highest non-compliance rate for an individual facility was 67 percent.

COMPLIANCE WITH PERMIT REQUIREMENTS

The following sections present the inspection results grouped together by similar clauses and evaluated together to assess compliance based on like requirements of the site-specific permits.

It should also be noted that a few clauses contained multiple sections/requirements. In an inspection report, only one compliance finding would be assigned per clause evaluated, regardless of the number of “sub-requirements” in a clause; the precedence of findings are as follows: “out-of-compliance” trumps “in compliance” trumps “compliance not determined” trumps “compliance not applicable”. For example, if a permittee is out of compliance with at least one sub-requirement in a clause, the permittee is automatically marked “out of compliance” with that clause regardless of the permittee’s compliance with the other sub-requirements of that clause.

For the purposes of this data analysis which evaluates how well the sector performed in certain compliance categories, if these “sub-requirements” fell under different compliance categories, they were counted as separate clauses. For example, if a single clause contained requirements for both discharge rate and period, both the evaluation of compliance with discharge rate and the evaluation of compliance with discharge period were counted as separate findings even though that may not be the case in the inspection report. Multiple sub-requirements occurred for the following compliance categories: discharge rate, discharge period, operations and maintenance, and non-compliance and emergency. This will therefore result in discrepancies between the sums in Table 3 and the sums in the following Tables 5 to 8 for those categories.

Additionally, the data analysis excludes clauses that were not evaluated.

PERMITTED DISCHARGE RATE, QUALITY, PERIOD, AND LOCATION

All permits for the 31 facilities inspected in this Audit set requirements limiting the discharge rate (i.e. quantity) of air containing contaminants of concern. The weighted aggregated compliance findings of all the discharge rate requirements inspected for the 31 facilities inspected in this Audit indicated that in 66 percent of evaluated facilities, ENV could not determine whether facilities were keeping within discharge rate limits due to the lack of monitoring requirements. Compliance was determined for 27 percent of evaluated facilities. The clause was not applicable at the time of the inspection to seven percent of evaluated facilities due to decommissioned facilities and/or lack of discharge.

Twenty-four permits included in this Audit set requirements outlining when air discharge was authorized to occur. Evaluations of compliance with discharge period requirements indicated 81 percent of evaluated facilities were compliant with these requirements. Ten percent of evaluated facilities exceeded the allowable discharge period and were therefore out of compliance. The clause was not applicable to nine percent of facilities at the time of the inspection due to decommissioned facilities and lack of discharge.

All permits for the 31 facilities inspected in this Audit set requirements for the quality of air discharges. Compliance with discharge quality requirements could not be determined for 75 percent of these facilities due to lack of monitoring requirements, or the qualitative (instead of quantitative) nature of the permit requirements. Thirteen percent of facilities were confirmed to be meeting their discharge quality standards. Six percent of facilities were confirmed to be out of compliance by exceeding particulate matter concentration limits, while compliance with discharge quality requirements were not

applicable to six percent of the facilities at the time of the inspection due to decommissioned facilities and lack of discharge.

Three permits included in this Audit specified authorized locations for air discharge (and related activities such as open burning). All three facilities inspected against these permits were confirmed to be in compliance with these requirements.

Table 5 illustrates the aggregated and weighted compliance findings for discharge rate, quality, and period and location requirements evaluated for permitted facilities in this Audit.

Table 5. Compliance Findings for Discharge Rate, Period, Quality and Location Requirements

| Permitted Facilities | Discharge Rate | | | | Discharge Period | | | | Discharge Quality | | | | Discharge Location | | | |
|----------------------------|----------------|-----|-----|-----|------------------|-----|----|-----|-------------------|-----|-----|-----|--------------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | - | - | 3 | - | - | - | - | - | - | - | 3 | - | - | - | - | - |
| 4096 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 8074 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 8109 | - | - | 3 | 1 | 4 | - | - | 1 | - | - | 3 | - | - | - | - | - |
| 8172 | - | - | 1 | 2 | - | - | - | 2 | - | - | 1 | 2 | - | - | - | - |
| 8174 | 1 | - | 7 | - | 8 | - | - | - | 1 | - | 7 | - | - | - | - | - |
| 8266 | 2 | - | - | - | 2 | - | - | - | 2 | - | - | - | - | - | - | - |
| 9094 | 1 | - | 7 | - | 7 | 1 | - | - | - | 1 | 7 | - | - | - | - | - |
| 10606 | - | - | 5 | 2 | 4 | 1 | - | - | 1 | - | 5 | 1 | - | - | - | - |
| 10656 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 10660 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | - |
| 12592 | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 13278 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 15749 | 1 | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 16047 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 16502 | 1 | - | 5 | - | 1 | - | - | - | 1 | - | 11 | - | - | - | - | - |
| 16522 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 16523 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 17530 | - | - | 2 | - | 2 | - | - | - | - | - | 2 | - | - | - | - | - |
| 17557 | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| 17802 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 2 | - | - | - |
| 18096 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 2 | - | - | - |
| 18312 | 2 | - | 2 | - | 4 | - | - | - | - | 2 | 4 | - | - | - | - | - |
| 100229 | 3 | - | - | - | - | - | - | - | 2 | 1 | 3 | - | - | - | - | - |
| 104133 | 1 | - | - | - | 3 | - | - | - | - | 4 | - | - | 3 | - | - | - |
| 105330 | 2 | - | 3 | - | 5 | - | - | - | 3 | - | 3 | - | - | - | - | - |
| 105808 | - | - | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - |
| 107227 | 1 | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - |
| 107369 | 3 | - | - | - | - | - | - | - | 3 | - | 2 | - | - | - | - | - |
| 108379 | - | - | 1 | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - |
| 109209 | 2 | - | 1 | - | 3 | - | - | - | 1 | 1 | 1 | - | - | - | - | - |
| Weighted Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 4096 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 8074 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 8109 | - | - | 0.8 | 0.3 | 0.8 | - | - | 0.2 | - | - | 1 | - | - | - | - | - |
| 8172 | - | - | 0.3 | 0.7 | - | - | - | 1 | - | - | 0.3 | 0.7 | - | - | - | - |
| 8174 | 0.1 | - | 0.9 | - | 1 | - | - | - | 0.1 | - | 0.9 | - | - | - | - | - |
| 8266 | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - |
| 9094 | 0.1 | - | 0.9 | - | 0.9 | 0.1 | - | - | - | 0.1 | 0.9 | - | - | - | - | - |
| 10606 | - | - | 0.7 | 0.3 | 0.8 | 0.2 | - | - | 0.1 | - | 0.7 | 0.1 | - | - | - | - |
| 10656 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 10660 | - | - | - | 1.0 | - | - | - | 1 | - | - | - | 1.0 | - | - | - | - |
| 12592 | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |

| Permitted Facilities | Discharge Rate | | | | Discharge Period | | | | Discharge Quality | | | | Discharge Location | | | |
|---|---------------------------------------|-----|------|-----|------------------|-----|----|-----|-------------------|-----|------|-----|--------------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| 13278 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 15749 | 0.5 | - | 0.5 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 16047 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 16502 | 0.2 | - | 0.8 | - | 1 | - | - | - | 0.1 | - | 0.9 | - | - | - | - | - |
| 16522 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 16523 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 17530 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - |
| 17557 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 17802 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - |
| 18096 | - | - | 1 | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - |
| 18312 | 0.5 | - | 0.5 | - | 1 | - | - | - | - | 0.3 | 0.7 | - | - | - | - | - |
| 100229 | 1 | - | - | - | - | - | - | - | 0.3 | 0.2 | 0.5 | - | - | - | - | - |
| 104133 | 1 | - | - | - | 1 | - | - | - | - | 1 | - | - | 1 | - | - | - |
| 105330 | 0.4 | - | 0.6 | - | 1 | - | - | - | 0.5 | - | 0.5 | - | - | - | - | - |
| 105808 | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 107227 | 1 | - | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - |
| 107369 | 1 | - | - | - | - | - | - | - | 0.6 | - | 0.4 | - | - | - | - | - |
| 108379 | - | - | 1 | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - |
| 109209 | 0.7 | - | 0.3 | - | 1 | - | - | - | 0.3 | 0.3 | 0.3 | - | - | - | - | - |
| Weighted Total | 8.5 | 0 | 20.3 | 2.2 | 19.5 | 2.3 | 0 | 2.2 | 4.1 | 2 | 23.1 | 1.8 | 3 | 0 | 0 | 0 |
| Weighted Percentage [%] | 27 | 0 | 66 | 7 | 81 | 10 | 0 | 9 | 13 | 6 | 75 | 6 | 100 | 0 | 0 | 0 |
| Weighted Percentage [%] (Applicable Only) | 28 | 0 | 72 | - | 89 | 11 | 0 | - | 14 | 7 | 80 | - | 100 | 0 | 0 | - |
| In | In Compliance | | | | | | | | | | | | | | | |
| Out | Out of Compliance | | | | | | | | | | | | | | | |
| ND | Compliance Not Determinable | | | | | | | | | | | | | | | |
| NA | Compliance with Clause Not Applicable | | | | | | | | | | | | | | | |

If compliance evaluations with non-applicable findings at the time of the inspection are excluded from the analysis, in-compliance rates for discharge related clauses range from 14 percent (discharge quality) to 100 percent (discharge location), non-compliance rates range from zero percent (discharge rate and location) to 11 percent (discharge period), and undeterminable compliance rates range from zero percent (discharge period and location) to 80 percent (discharge quality).

MONITORING AND DATA COLLECTION, REPORTING, AGENCY OBLIGATIONS, AND PROVISIONAL

Fifteen permits included in this Audit contained requirements for environmental monitoring and data collection. Evaluations of compliance with monitoring requirements confirmed that 62 percent of facilities conducted monitoring and data collection as required. Conversely, 23 percent of facilities failed to conduct monitoring as required. Compliance could not be determined for 12 percent of facilities due largely to either lack of data reported or data validity concerns. Compliance with monitoring requirements were not applicable to four percent of facilities at the time of the inspection.

Fifteen permits included in this Audit contained requirements for reporting and data submission. Fifty-three percent of facilities submitted reports and data submission as required, while 28 percent of facilities were out of compliance due to late report submissions or submissions missing required data. Compliance with reporting requirements were not applicable to the remaining 19 percent of facilities at the time of the inspection due to lack of qualifying conditions.

Four permits included in this Audit contained requirements for fulfilling obligations to other agencies and stakeholders, such as addressing any public concerns, communication with Indigenous peoples and other government authorities, etc. One facility was in compliance while one facility was out of compliance with these requirements. Compliance for the remaining two facilities could not be determined at the time of the inspection.

Twenty permits included in this Audit contained provisional requirements for actions that may potentially be required by ENV in the future (such as additional monitoring or upgrades to works); 50 out of the 706 compliance evaluations performed in this Audit were against provisional requirements. Compliance for all compliance evaluations performed against provisional requirements was either not determinable or not applicable to the facilities at the time of the inspection.

Table 6 illustrates the aggregated and weighted compliance findings for monitoring and data collection, reporting, obligations to other agencies, and provisional requirements evaluated for permitted facilities in this Audit.

Table 6. Compliance Findings for Monitoring and Data Collection, Reporting, Obligations to Other Agencies, and Provisional Requirements

| Permitted Facilities | Monitoring and Data Collection | | | | Reporting | | | | Other Agencies | | | | Provisional | | | |
|----------------------------|--------------------------------|-----|----|----|-----------|-----|----|----|----------------|-----|----|----|-------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| 4096 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| 8074 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 8109 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 8172 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8174 | - | 1 | 3 | - | - | 2 | - | - | - | - | - | - | - | - | - | - |
| 8266 | 2 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 9094 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 |
| 10606 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| 10656 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 10660 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 12592 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 13278 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 15749 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16047 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16502 | 4 | 2 | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | 6 |
| 16522 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 16523 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| 17530 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17557 | 1 | 1 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - |
| 17802 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| 18096 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| 18312 | 7 | 1 | 1 | - | 2 | 1 | - | - | - | - | - | - | - | - | - | 4 |
| 100229 | 3 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 104133 | 6 | 1 | - | - | 1 | - | - | 1 | - | - | - | - | - | - | - | - |
| 105330 | 1 | 4 | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | 3 |
| 105808 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 4 |
| 107227 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| 107369 | 5 | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - | - | 6 |
| 108379 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 109209 | 4 | 1 | 1 | 3 | 1 | - | - | 3 | - | 1 | - | - | - | - | - | 3 |
| Weighted Tally of Findings | | | | | | | | | | | | | | | | |

| Permitted Facilities | Monitoring and Data Collection | | | | Reporting | | | | Other Agencies | | | | Provisional | | | |
|--|--------------------------------|-----|-----|-----|-----------|-----|----|-----|----------------|-----|----|----|-------------|-----|-----|------|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| 1907 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 4096 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 8074 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 8109 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 8172 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8174 | - | 0.3 | 0.8 | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 8266 | 0.7 | 0.3 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 9094 | 1 | - | - | 0 | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 10606 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 10656 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 10660 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 12592 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 13278 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 15749 | 0.5 | 0.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16047 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16502 | 0.4 | 0.2 | 0.3 | - | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 16522 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 16523 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| 17530 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17557 | 0.3 | 0.3 | 0.3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - |
| 17802 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| 18096 | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| 18312 | 0.8 | 0.1 | 0.1 | - | 0.7 | 0.3 | - | - | - | - | - | - | - | - | - | 1 |
| 100229 | 0.5 | 0.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 104133 | 0.9 | 0.1 | - | - | 0.5 | - | - | 0.5 | - | - | - | - | - | - | - | - |
| 105330 | 0.2 | 0.7 | - | 0.2 | - | 1 | - | - | - | - | - | - | - | - | - | 1 |
| 105808 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 107227 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| 107369 | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | 0.2 | 0.8 |
| 108379 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 109209 | 0.4 | 0.1 | 0.1 | 0.3 | 0.3 | - | - | 0.8 | - | 1 | - | - | - | - | - | 1 |
| Weighted Total | 8.7 | 3.2 | 1.6 | 0.5 | 6.4 | 3.3 | 0 | 2.3 | 1 | 1 | 2 | 0 | 0 | 0 | 2.2 | 19.8 |
| Weighted Percentage [%] | 62 | 23 | 12 | 4 | 53 | 28 | 0 | 19 | 25 | 25 | 50 | 0 | 0 | 0 | 10 | 90 |
| Weighted Percentage [%] (Applicable Only) | 64 | 24 | 12 | - | 70 | 30 | 0 | - | 25 | 25 | 50 | - | 0 | 0 | 100 | - |

If compliance evaluations with non-applicable findings at the time of the inspection are excluded from the analysis, in-compliance rates for monitoring, reporting, agency and provisional related clauses range from zero percent (provisional) to 70 percent (reporting), non-compliance rates range from zero percent (provisional) to 30 percent (reporting), and undeterminable compliance rates range from zero percent (reporting) to 50 percent (other agencies).

OPERATIONS AND MAINTENANCE, BURNING ACTIVITIES, FUGITIVE EMISSIONS MANAGEMENT, AND WASTE DISPOSAL

Of the 31 permits included in this Audit, 28 permits contained requirements on operations and maintenance; i.e. routine inspections and upkeep of authorized works, and adherence to required operational practices. Evaluations of compliance with these requirements determined that 64 percent of facilities were compliant, while 23 percent of facilities failed to conduct inspections or maintenance on all authorized works as required. Compliance could not be determined for eight percent of facilities due mostly to lack of access to pollution control device manufacturer specifications for verification or

director specifications. Compliance with the requirements was not applicable to six percent of facilities at the time of the inspection.

Three permits included in this Audit contained requirements detailing proper practices for burning wood and other wastes on site. All three facilities were compliant with these requirements.

Twenty-seven permits contained requirements on management of fugitive emissions (mainly particulates). Sixty-nine percent of facilities were compliant with these requirements. Eleven percent of facilities were out of compliance due to failure to prepare or update emission management plans as required. Compliance could not be determined for 13 percent of facilities, and compliance was not applicable to seven percent of facilities at the time of the inspection.

Eight permits included in this Audit contained requirements regarding the disposal of waste materials such as combustion residue, wood waste, dust, and effluent. Half of the facilities were determined to be in compliance with these requirements. Compliance for the other half were either not determinable or not applicable to the facilities at the time of the inspection.

Table 7 illustrates the aggregated and weighted compliance findings for operations and maintenance, burning activities, fugitive emissions management, and waste disposal requirements evaluated for permitted facilities in this Audit.

Table 7. Compliance Findings for Operations and Maintenance, Burning Activities, Fugitive Emissions Management, and Waste Disposal Requirements

| Permitted Facilities | Operations and Maintenance | | | | Burning Activities | | | | Fugitive Emissions Management | | | | Waste Disposal | | | |
|----------------------|----------------------------|-----|----|----|--------------------|-----|----|----|-------------------------------|-----|----|----|----------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | 3 | 1 | 1 | - | - | - | - | - | 2 | - | 1 | - | - | - | - | - |
| 4096 | 1 | - | - | - | - | - | - | - | 1 | - | - | 1 | - | - | - | - |
| 8074 | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 8109 | 4 | 3 | - | 1 | - | - | - | - | 2 | - | 1 | - | - | - | - | - |
| 8172 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 8174 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - |
| 8266 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 9094 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 |
| 10606 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 |
| 10656 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 10660 | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 12592 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 13278 | 1 | - | - | - | - | - | - | - | - | - | 2 | - | - | - | - | - |
| 15749 | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - |
| 16047 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 16502 | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - |
| 16522 | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - |
| 16523 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17530 | 2 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 17557 | 1 | 1 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| 17802 | - | - | - | - | 11 | - | - | - | - | - | - | - | 1 | - | - | - |
| 18096 | - | - | - | - | 10 | - | - | - | - | - | - | - | 1 | - | - | - |
| 18312 | 1 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| 100229 | 1 | 1 | 2 | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 104133 | - | 3 | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - |
| 105330 | 2 | - | - | - | 1 | - | - | - | - | 1 | 1 | - | 1 | - | - | - |

| Permitted Facilities | Operations and Maintenance | | | | Burning Activities | | | | Fugitive Emissions Management | | | | Waste Disposal | | | |
|--|----------------------------|-----|-----|-----|--------------------|-----|----|----|-------------------------------|-----|-----|-----|----------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| 105808 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 2 | - | - | - |
| 107227 | 1 | - | - | 1 | - | - | - | - | 3 | - | 1 | - | - | - | - | - |
| 107369 | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| 108379 | 1 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| 109209 | - | 1 | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Weighted Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | 0.6 | 0.2 | 0.2 | - | - | - | - | - | 0.7 | - | 0.3 | - | - | - | - | - |
| 4096 | 1 | - | - | - | - | - | - | - | 0.5 | - | - | 0.5 | - | - | - | - |
| 8074 | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 8109 | 0.5 | 0.4 | - | 0.1 | - | - | - | - | 0.7 | - | 0.3 | - | - | - | - | - |
| 8172 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 8174 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - |
| 8266 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 9094 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 |
| 10606 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 |
| 10656 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 10660 | - | - | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 12592 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 13278 | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| 15749 | - | - | - | - | - | - | - | - | - | - | 0.5 | 0.5 | - | - | - | - |
| 16047 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 16502 | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - |
| 16522 | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - |
| 16523 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 17530 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 17557 | 0.5 | 0.5 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 17802 | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - |
| 18096 | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | - |
| 18312 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 100229 | 0.3 | 0.3 | 0.5 | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 104133 | - | 1 | - | - | - | - | - | - | - | 0.5 | 0.5 | - | - | - | - | - |
| 105330 | 1 | - | - | - | 1 | - | - | - | - | 0.5 | 0.5 | - | 1 | - | - | - |
| 105808 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - |
| 107227 | 0.5 | - | - | 0.5 | - | - | - | - | 0.8 | - | 0.3 | - | - | - | - | - |
| 107369 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| 108379 | 0.5 | 0.5 | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| 109209 | - | 0.5 | 0.5 | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Weighted Total | 17.9 | 6.3 | 2.2 | 1.6 | 3.0 | 0 | 0 | 0 | 18.6 | 3 | 3.4 | 2 | 4 | 0 | 2 | 2 |
| Weighted Percentage [%] | 64 | 23 | 8 | 6 | 100 | 0 | 0 | 0 | 69 | 11 | 13 | 7 | 50 | 0 | 25 | 25 |
| Weighted Percentage [%] (Applicable Only) | 68 | 24 | 8 | - | 100 | 0 | 0 | - | 73 | 12 | 15 | - | 67 | 0 | 33 | - |

If compliance evaluations with non-applicable findings at the time of the inspection are excluded from the analysis, in-compliance rates for site management related clauses range from 67 percent (waste disposal) to 100 percent (burning activities), non-compliance rates range from zero percent (burning activities and waste disposal) to 24 percent (operations and maintenance), and undeterminable compliance rates range from zero percent (burning activities) to 33 percent (waste disposal).

AUTHORIZED WORKS CONFIRMATION, BYPASSES, NON-COMPLIANCE AND EMERGENCY, AND NOTIFICATION OF CHANGES

Twenty-nine permits included in this Audit contained descriptions of authorized works at each facility. ENV verified that authorized works at 85 percent of facilities were present as described in their permits.

In 10 percent of facilities inspected by ENV, authorized works were missing, replaced with unauthorized substitutions, or not operational during discharge. Compliance with the authorized works requirements was either undeterminable or not applicable at the time of the inspection for the remaining five percent of facilities due to lack of activity on-site at the time of the inspection.

Twenty-seven permits included in this Audit contained requirements prohibiting the discharge of waste that bypassed authorized treatment works unless the prior approval of the Director is obtained and confirmed in writing. ENV evaluated compliance with these requirements and determined that unapproved bypasses did not occur in 89 percent of evaluated facilities (findings of compliance or compliance not applicable at the time of the inspection). Seven percent of facilities were out of compliance for unapproved bypasses, while compliance could not be determined for four percent of facilities.

Twenty-one facilities contained required actions the permittee must take in the event of emergency or non-compliance. Evaluations of compliance with these requirements indicated that emergencies/non-compliances did not occur or were addressed as required at 79 percent of evaluated facilities. However, 21 percent of evaluated facilities were out of compliance due largely to failure to provide timely notification of the incident to ENV; other reasons include failure to submit required follow-up reports, and failure to conduct required re-testing.

Nineteen facilities contained requirements to notify ENV of changes to processes and operations as well as administrative details. Seven percent of facilities were out of compliance by failing to notify ENV of changes as required.

Table 8 illustrates the aggregated and weighted compliance findings for authorized works, bypasses, non-compliance and emergency, and notification of changes requirements evaluated for permitted facilities in this Audit.

Table 8 Compliance Findings for Authorized Works Confirmation, Bypasses, Non-Compliance and Emergency, and Notification of Changes Requirements

| Permitted Facilities | Authorized Works Confirmation | | | | Bypasses | | | | Non-Compliance and Emergency | | | | Notification of Changes | | | |
|----------------------|-------------------------------|-----|----|----|----------|-----|----|----|------------------------------|-----|----|----|-------------------------|-----|----|----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | 6 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 4096 | 1 | - | 1 | - | 1 | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| 8074 | 2 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 8109 | 9 | - | 1 | 1 | - | - | - | 1 | - | - | - | - | - | - | - | 2 |
| 8172 | 2 | 4 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 8174 | 14 | - | 1 | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 2 |
| 8266 | 4 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 9094 | 8 | - | - | - | - | - | - | 1 | - | - | - | 1 | 1 | 1 | - | - |
| 10606 | 4 | - | - | 1 | - | - | - | 1 | - | - | - | 1 | 1 | - | - | - |
| 10656 | 2 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 10660 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12592 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 13278 | 2 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 15749 | 3 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 2 |
| 16047 | 2 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 2 |

| Permitted Facilities | Authorized Works Confirmation | | | | Bypasses | | | | Non-Compliance and Emergency | | | | Notification of Changes | | | |
|---|-------------------------------|-----|-----|-----|----------|-----|----|----|------------------------------|-----|----|------|-------------------------|-----|-----|-----|
| | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA | In | Out | ND | NA |
| 16502 | 6 | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - |
| 16522 | 1 | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | 1 | 1 |
| 16523 | - | 2 | - | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - |
| 17530 | 3 | - | 1 | - | - | - | - | - | - | - | - | 1 | - | - | - | 2 |
| 17557 | 3 | - | - | - | - | - | - | 1 | - | 2 | - | - | - | - | 1 | - |
| 17802 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 18096 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 18312 | 4 | - | - | - | 1 | - | - | - | - | 3 | - | 1 | - | - | - | 1 |
| 100229 | 3 | - | - | - | 1 | - | - | - | - | 2 | - | 1 | - | - | 1 | - |
| 104133 | 2 | - | 1 | - | 1 | - | - | - | - | 1 | - | - | 1 | - | - | - |
| 105330 | 8 | - | - | - | - | - | - | 1 | - | 1 | - | 2 | - | - | 1 | - |
| 105808 | 2 | - | - | - | - | - | - | 1 | - | - | - | 2 | - | - | - | 1 |
| 107227 | 2 | - | - | - | 1 | - | - | - | 1 | - | - | 1 | 1 | - | - | - |
| 107369 | 5 | - | - | - | - | - | - | 1 | - | - | - | 2 | - | - | - | 1 |
| 108379 | 2 | - | - | - | - | - | - | 1 | - | 1 | - | 1 | - | - | - | 1 |
| 109209 | 5 | 1 | - | - | - | 1 | - | - | 1 | 3 | - | - | - | - | - | - |
| Weighted Tally of Findings | | | | | | | | | | | | | | | | |
| 1907 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 4096 | 0.5 | - | 0.5 | - | 1 | - | - | - | - | - | - | 1 | - | 0.5 | - | 0.5 |
| 8074 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 8109 | 0.8 | - | 0.1 | 0.1 | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 8172 | 0.3 | 0.7 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| 8174 | 0.9 | - | 0.1 | 0.1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 8266 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 9094 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | 0.5 | 0.5 | - | - |
| 10606 | 0.8 | - | - | 0.2 | - | - | - | 1 | - | - | - | 1 | 1 | - | - | - |
| 10656 | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 10660 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 12592 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 13278 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 15749 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 16047 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 16502 | 1 | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - |
| 16522 | 1 | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | 0.5 | 0.5 |
| 16523 | - | 1 | - | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - |
| 17530 | 0.8 | - | 0.3 | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 |
| 17557 | 1 | - | - | - | - | - | - | 1 | - | 1 | - | - | - | - | 1 | - |
| 17802 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 18096 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 18312 | 1 | - | - | - | 1 | - | - | - | - | 0.8 | - | 0.3 | - | - | - | 1 |
| 100229 | 1 | - | - | - | 1 | - | - | - | - | 0.7 | - | 0.3 | - | - | 1 | - |
| 104133 | 0.7 | - | 0.3 | - | 1 | - | - | - | - | 1 | - | - | 1 | - | - | - |
| 105330 | 1 | - | - | - | - | - | - | 1 | - | 0.3 | - | 0.7 | - | - | 1 | - |
| 105808 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 107227 | 1 | - | - | - | 1 | - | - | - | 0.5 | - | - | 0.5 | 1 | - | - | - |
| 107369 | 1 | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 |
| 108379 | 1 | - | - | - | - | - | - | 1 | - | 0.5 | - | 0.5 | - | - | - | 1 |
| 109209 | 0.8 | 0.2 | - | - | - | 1 | - | - | 0.3 | 0.8 | - | - | - | - | - | - |
| Weighted Total | 24.6 | 2.8 | 1.2 | 0.4 | 7 | 2 | 1 | 17 | 0.8 | 5 | 0 | 18.3 | 3.5 | 2 | 3.5 | 18 |
| Weighted Percentage [%] | 85 | 10 | 4 | 1 | 26 | 7 | 4 | 63 | 3 | 21 | 0 | 76 | 13 | 7 | 13 | 67 |
| Weighted Percentage [%] (Applicable Only) | 86 | 10 | 4 | - | 70 | 20 | 10 | - | 16 | 84 | 0 | - | 35 | 25 | 40 | - |

If compliance evaluations with non-applicable findings at the time of the inspection are excluded from the analysis, in-compliance rates for authorized works, bypasses, non-compliance and emergency, and notification related clauses range from 16 percent (non-compliance and emergency) to 86 percent (authorized works confirmation) non-compliance rates range from ten percent (authorized works

confirmation) to 84 percent (non-compliance and emergency), and undeterminable compliance rates range from zero percent (non-compliance and emergency) to 40 percent (notification of changes).

COMPLIANCE WITH HWR REQUIREMENTS

Twenty-two facilities were evaluated for one or more of the following HWR requirements: Sections 16(1)(a), 16(1)(b), 17(1)(b), 43(1), 45.1(2)(c)(i), 46(4), 46(5), 46(8.1), 46(9), 50(3)(a), 50(3)(b), 50(3)(c), and 50(8). These sections contained requirements for hazardous waste containment (security and labelling), effluent quality, manifest completion and maintenance, hazardous waste registration, and hazardous waste storage conditions.

In total, 110 compliance evaluations were completed for 22 facilities against 13 HWR sections; compliance with the requirements was determined to be applicable to the facility at the time of the inspection for 93 of these evaluations. Of those 93 evaluations where compliance was applicable, 42 percent of evaluations resulted in findings of compliance, 49 percent of evaluations resulted in findings of non-compliance, and nine percent of evaluations resulted in findings of undeterminable compliance.

All facilities evaluated for Sections 16(1)(a), 46(4), and 46(5) demonstrated compliance with these requirements. The highest rates of non-compliance were noted in Sections 46(9) and 50(3)(c).

Table 9 details the compliance findings for HWR inspections at select facilities included in the SWPI Audit.

Table 9. Compliance Findings for HWR Inspections

| HWR Section | Findings |
|------------------|---|
| Containers | |
| 50 (3)(a) | Twenty-one facilities were evaluated for this requirement; eleven facilities were compliant. Nine facilities were out of compliance for unsecured (open) containers of hazardous waste. Compliance could not be determined for one facility as a container was observed to be open, but it was unclear what material was inside the open container. |
| 50 (3)(b) | Twenty facilities were evaluated for this requirement; 14 facilities were compliant. Four facilities were out of compliance for observed storage of containers of hazardous waste in a manner which could allow leaks or ruptures. Compliance could not be determined for two facilities. |
| 50 (3)(c) | Twenty-one facilities were evaluated for this requirement; four facilities were compliant. Seventeen facilities were out of compliance for observed lack of required labelling on containers of hazardous waste. |
| 50 (8) | One facility was evaluated for this requirement and compliance with the requirement was determined to not be applicable at the time of the inspection due to lack of hazardous waste present on site at the time of the inspection. |
| Effluent | |

| HWR Section | Findings |
|-----------------------|---|
| 17 (1)(b) | Two facilities were evaluated for this requirement with non-compliance and non-determinable compliance findings due to lack of ensuring effluent meets required criteria and lack of effluent monitoring. |
| Manifests | |
| 45.1 (2)(c)(i) | Two facilities were evaluated for this requirement. One was compliant, while the other was out of compliance for using the incorrect shipping name on inspected manifests. |
| 46 (4) | One facility was evaluated for this requirement and determined to be compliant with completing their manifests as required. |
| 46 (5) | One facility was evaluated for this requirement and determined to be compliant with completing their manifests as required. |
| 46 (8.1) | Two facilities were evaluated for this requirement and both were determined to be out of compliance by failing to notify ENV that the consignor was unable to obtain the applicable copy of the manifest from the consignee within the required timeframe. |
| 46 (9) | Thirteen facilities were evaluated for this requirement, one of which was determined to be in compliance. Ten facilities were out of compliance for failing to retain copies of manifests on-site for the required two years after the hazardous waste was delivered to the consignee. Compliance could not be determined for two facilities as it could not be confirmed whether hazardous waste had been transported during the inspection period. |
| Registration | |
| 43 (1) | Nineteen facilities were evaluated for this requirement, none of which were confirmed to be in compliance. One facility was determined to be out of compliance due to failure to apply for a generator registration for removal of waste oil that exceeded applicable amounts. Compliance could not be determined for two facilities as the hazardous waste observed by ENV to be stored on-site had not been classified. Compliance was not applicable to 16 facilities at the time of the inspection as on-site volumes of hazardous waste were below the registration threshold. |
| Storage | |
| 16 (1)(a) | Six facilities were evaluated for this requirement, and all were confirmed to be in compliance. |
| 16 (1)(b) | One facility was evaluated for this requirement and determined to be out of compliance for lacking an impervious containment system on-site. |

PELLET PLANTS – FEATURE

Nine of the 31 facilities included in this Audit are pellet plants, which are typically the largest and most complex operations inspected during this Audit.

Overall, with respect to compliance findings against requirements for which compliance was applicable at the time of inspection, the inspected pellet plants have over 80 percent compliance rate with reporting requirements, authorized works usage, and lack of unapproved bypasses, and full compliance with discharging within authorized time periods, discharging at approved locations, burning requirements, and waste disposal requirements. Roughly 50 to 70 percent compliance was achieved for remaining within discharge rate limits, conducting required monitoring and data collection, requirements from other agencies, operations and maintenance requirements, and fugitive emissions management requirements.

Notable non-compliance rates of 96 percent for the non-compliance and emergency category resulted from failing to report non-compliances in a timely manner, conduct required re-testing, or submit follow-up reports.

With respect to compliance findings from inspections performed against the HWR at pellet plant facilities, 34 compliance evaluations against individual sections in the HWR were performed in total for pellet plants. 41 percent of the findings were “in compliance”, 41 percent were “out of compliance” and the remaining 18 percent was either “compliance not determined” or “compliance not applicable at the time of inspection.”

Applicable Compliance Findings Against Permit Requirements of Pellet Plants

| Compliance Category | Percentage of Facilities [%] | | |
|--------------------------------|------------------------------|-----|-----|
| | In | Out | ND |
| Discharge Rate | 64 | 0 | 36 |
| Discharge Period | 100 | 0 | 0 |
| Discharge Quality | 32 | 20 | 48 |
| Discharge Location | 100 | 0 | 0 |
| Monitoring and Data Collection | 60 | 28 | 12 |
| Reporting | 81 | 19 | 0 |
| Other Agencies | 50 | 50 | 0 |
| Provisional | 0 | 0 | 100 |
| Operations and Maintenance | 48 | 38 | 13 |
| Burning Activities | 100 | 0 | 0 |
| Fugitive Emissions Management | 58 | 25 | 17 |
| Waste Disposal | 100 | 0 | 0 |
| Authorized Works Confirmation | 94 | 2 | 4 |
| Bypasses | 80 | 20 | 0 |
| Non-Compliance and Emergency | 4 | 96 | 0 |
| Notification of Changes | 25 | 0 | 75 |

CONCLUSIONS AND RECOMMENDATIONS

Findings from the 2019 SWPI Audit conducted on 31 SWP facilities in B.C. have highlighted opportunities of improvement for the SWP sector and ENV. Facility owner/operators are reminded to ensure that facility staff is aware of and comply with all permit requirements as well as HWR requirements.

Facility owner/operators are reminded of the following:

- ❖ Ensure that authorized air discharges meet specified discharge quality standards (e.g. particulate matter concentration limits) and occur within allowable discharge periods.
- ❖ Ensure that monitoring is conducted as required, and that reports are submitted on time and complete with required information.
- ❖ Ensure that emission management plans are prepared and updated as required.
- ❖ Ensure that routine inspections and maintenance of authorized works is conducted as required.
- ❖ Ensure that authorized works are complete and fully operational during discharge, with no unauthorized substitutions. Bypasses of authorized works are prohibited unless prior approval from ENV is obtained.
- ❖ Ensure that ENV is notified in advance of any modifications to discharge processes and infrastructure, as well as changes to ownership and permittee names or administrative details.
- ❖ Ensure that timely notification of any incidents or emergencies is provided to ENV as required, and that re-testing is conducted, and follow-up reports are submitted as required.
- ❖ Ensure hazardous waste is managed in accordance with HWR requirements, such as proper container labelling and storage conditions and proper records management.

In the interests of allowing for timely evaluation of performance in mitigating impacts to human health and the environment, ENV is recommended to consider the following:

- ❖ Review permits for the secondary wood processing industry for enforceability; quantitative requirements for routine monitoring of discharge quantity/rate and discharge quality and reporting should be added if they are absent from permits.
- ❖ The high rates of non-compliance with sections of the HWR show that there is an opportunity for ENV to conduct outreach and promotional work on how to comply with the HWR as a small generator.
- ❖ This is a promotional opportunity for informing sites on reporting methods (e.g. use of the Routine Environmental Reporting Submission mailbox, non-compliance reporting mailbox, and submission of amendment requests, etc.)