

**The following locations are included
in the attached scoring sheet summary:
(60 locations)**

1992 Environmental Audits:

Arkansas
Hedges Gold
Kwinana
Northwest Alloys - Addy, WA
Permotech, Inc.
Pimalco
Pinjarra
Rockdale
Vernon Works (Forge/Ingot)
Vidalia Works
Wagerup
Wenatchee
Western Australia Mines

1993 Environmental Audits:

ABP Denison
ABP Stuarts Draft
AFL Dearborn
AFL Del Rio
AFL Houston
AFL Spartanburg
Alcoa Electronic Packaging
Alcoa Kasei Ltd.
Alcoa Recycling Company
Alcoa Vinyl Windows
AlcoTec
Allpro
Burgerhout
Caradco

Dalton Alumina & Chemicals Co.
Drunen Operations
HC Industries - Crawfordsville, IN
HC Industries - Olive Branch, MS
Intal
Intransit B.V.
Lebanon Works
Massena Operations
Moralco
Paradise Point
Pt. Henry/Anglesea
Portland
Ragsdale Machinery
Railroads
Shibazaki Seisakusho
Specialty Metals
Structural Laminates
Suralco
Tellig Operations
Tifton Aluminum Company
Viernheim Operations
Worms Operations

1994 Environmental Audits:

Acuña Cutting Facility
Acuña Plants 1-5 (5 locations)
Acuña Support Plant
Acuña Transfer Station
Ludwigshafen Works
Mobile Works
Rotterdam Operations

PLAINTIFF'S
EXHIBIT
AL-1348

C60712 0174

AIR:

1. Environmental management system for air program has: experienced, trained personnel, clearly defined responsibilities and division of duties, key action authorization procedure, effective documentation and internal verification for quality performance? (Section I)

- No clearly defined responsibilities. Not good documentation. (Arkansas, 10/92) Ritzert **(GMR)**
- Did not fulfill commitment to state to develop budget to reduce fugitives. (Wenatchee, 10/92) Byers **(GMR)**
- Two major air sources are in paint line operation -1,1,1-TCA (non-controlled) and electrostatic spray paint (controlled). No formal responsibilities for air program were identified - system needs to be formally installed, especially with upcoming phase out of 1,1,1-TCA. (Burgerhout, 4/93) Lease **(GMR)**
- Facility personnel have no knowledge of or familiarity with issues related to air pollution control. Unfamiliar with the words HAP, PSP, etc. (ABP Denison, 3/93) Waechter **(RSI)**
- Facility was not aware of Ohio permitting requirements. No systems were in place to review regulations or evaluate new installation or modifications of existing sources to determine requirements. (Alcoa Vinyl Windows, 4/93) Waechter **(RSI)**
- Maintenance of baghouses and ESP. (Moralco, 8/93) Kerkhof **(MR)**
- Program lacks depth - need regulatory training for environmental coordinator. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- Program considered adequate for level and size of facility. (AFL - Dearborn, 9/93) Lease **(MR)**
- Location has applied for and received required permits, however permits have a number of conditions and recordkeeping requirements that are not being monitored and in some instances are not conformed with. (Caradco, 7/93) Waechter **(GMR)**
- ARC is beginning to put programs in place to assure requirements are met. New installations are reviewed for permit requirements. However at least three locations with existing sources, air/construction permits have not been applied for. At the Atlanta facility particulate from the shred operation can be seen off plant property. (Alcoa Recycling Company, 5/93) Kerkhof **(GMR)**
- Facility has permits, knowledgeable staff. (Alcoa Electronic Packaging, 10/93) Kerkhof **(MR)**

C60712 0175

AIR:

1. Environmental management system for air program has: experienced, trained personnel, clearly defined responsibilities and division of duties, key action authorization procedure, effective documentation and internal verification for quality performance? (Section I) continued

- Limited systems to monitor existing permit exemption. No procedures to evaluate modification, or new process or installation impact or requirements. Location environmental personnel are not familiar enough with state environmental regulations (additional training required). (Ragsdale Machinery, 8/93) Waechter (GMR)
- Personnel are not aware of permit requirements. Systems are not in place to assure upcoming regulatory requirements and existing requirements are met. Operations changes are not evaluated to determine impact on emissions. (Drunen, 12/93) Waechter (GMR)
- Dave Collins is primary air contact. Documentation lacking in some areas. Additional resource(s) could be used for source assessments and SO₂ strategy development. (Pt. Henry/Anglesea, 10/93) Lease (GMR)
- Knowledgeable with Worms, small source paint booth with emission abatement. (Viernheim, 11/93) Kerkhof (MR)
- Air program generally in good shape but lack of awareness regarding permit conditions and need to obtain construction permits prior to facility modifications moved this to Gen. Meets. (Dalton, 1/94) Lease (GMR)
- Location manager also manages environmental program with limited training or support from BU resources. Has resulted in unawareness and non-conformance with some regulatory requirements and permit conditions. (Mobile, 1/94) Waechter (GMR)
- No preventative maintenance program for dust collectors, fugitive dust. (Ludwigshafen, 2/94) Kerkhof (GMR)
- No preventative maintenance program for inspection recording of dust collectors. No program for future requirements. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0176

AIR:

2. Operation has evaluated all sources for permit requirements with copies of all permits and consent orders for air emission sources? (Section IX)

- Did not register new stack in ingot plant. Did not assess emissions changes related to production changes. (Wenatchee, 10/92) Byers **(GMR)**
- Paint oven may need a permit - will be addressed in revised operating permit. (Burgerhout, 4/93) Lease **(GMR)**
- Facility has not evaluated all sources for permit requirement. Need for more permits and re-evaluating existing permit. (ABP Denison, 3/93) Waechter **(RSI)**
- No permits to install, operate or register were obtained for sources at the location (~8 -10 sources). (Alcoa Vinyl Windows, 4/93) Waechter **(RSI)**
- Permits available. (Alcoa Kasei, 8/93) Kerkhof **(MR)**
- Has notifications in place. (Moralco, 8/93) Kerkhof **(MR)**
- Source registration for air sources is outdated, however State has stated they are not looking for an update. BMP dictates that registration be updated to reflect current facility conditions. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- Need to resolve permit status for Building 2 emission sources. (AFL - Dearborn, 9/93) Lease **(GMR)**
- Location has required permit. (Caradco, 7/93) Waechter **(MR)**
- New installations have been reviewed and permits applied for, however at three locations (Atlanta, Maryville and Indiana) existing sources do not have construction permits as required or have not been evaluated to be assured none are needed. (Alcoa Recycling Company, 5/93) Kerkhof **(GMR)**
- Has unnecessary permit. (Alcoa Electronic Packaging, 10/93) Kerkhof **(GMR)**
- Permit exemption has record keeping and reporting requirements that are not adhered to. No evaluation of the applicability of air permitting requirement to base coat and decorator operations has been made. (Ragsdale Machinery, 8/93) Waechter **(RSI)**
- Emission inventory prepared for all sources. Air toxics potential emissions exceed regulatory threshold which requires a permit, but permit has not been acquired. State agency is aware of emissions levels but has not called for a permit. Facility needs to resolved permit status with the agency. (AFL Spartanburg, 12/93) Lease **(GMR)**

C60712 0177

AIR:

2. Operation has evaluated all sources for permit requirements with copies of all permits and consent orders for air emission sources? (Section IX) continued

- Permit has not identified all air sources. Record keeping requirement mandated under permit are not adhered to. Permit limits are being exceeded on a number of air sources. (Drunen, 12/93) Waechter (**GMR**)
- Permits in place. Some permits judged to not adequately cover potential source emissions. Basis for limits for some sources not documented or clear. (Pt. Henry/Anglesea, 10/93) Lease (**GMR**)
- Permit which was issued in 1985 was outdated. Several changes had been made to the source, however written notification was not provided to the Agency as required in the permit. (Dalton, 1/94) Lease (**RSI**)
- Re-evaluation of sources. Testing and reporting ongoing. (Acuña Support Plant, 1/94) Kerkhof (**MR**)
- All sources. (Ludwigshafen, 2/94) Kerkhof (**MR**)
- All sources permitted, documents available. (Rotterdam, 2/94) Kerkhof (**GMR**)

C60712 0178

AIR:

3. Sources under New Source Performance Standards (NESHAP & Operating Permits) are meeting standards? (Section III)

- Facility is currently not regulated under NSPS, but since no review of existing operations has been done, there is a potential for future applicability. (ABP Denison, 3/93) Waechter (GMR)
- No repeat testing of incinerators. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)

C60712 0179

AIR:

**4. Operation has provided estimates of emissions loading for each major air pollutant?
(Section IV)**

- Did not assess emission changes related to production changes. (Wenatchee, 10/92) Byers (RSI)
- SARA reporting covers this? (Northwest Alloys, 11/92) Stroud (MR)
- 1,1,1-TCA⇒major pollutant paint powder controlled by baghouses. (Burgerhout, 4/93) Lease (MR)
- No estimates of emissions loading were available with the exception of those supplied in the original permit application by MASTIC. (ABP Denison, 3/93) Waechter (RSI)
- Most of the sources at Massena have never had emissions testing completed. Few operations have been evaluated since installation to assure permit requirements are being met (no requirement to do so). (Massena, 6/93) Waechter (GMR)
- Use of baghouses and test. (Alcoa Kasei, 8/93) Kerkhof (GMR)
- Regular outside testing. (Moralco, 8/93) Kerkhof (MR)
- Wrong coefficient used for particulates. Air toxics emissions potential quite low. Have looked at CAA HAPs, however they need to look at Virginia's Air Toxics Regulation. (ABP Stuarts Draft, 8/93) Lease (GMR)
- De minimis quantities of emissions. (AFL - Dearborn, 9/93) Lease (N/A)
- Recent inventory. (Alcoa Electronic Packaging, 10/93) Kerkhof (MR)
- All emissions measurements and calculations are ~5-10 years old. Old emissions levels indicate non-conformance with existing regulatory requirements. (Drunen, 12/93) Waechter (RSI)
- Estimates for some sources may be flawed and/or incomplete. Pt. Henry currently developing source characterization plan for EPA. (Pt. Henry/Anglesea, 10/93) Lease (GMR)
- Equipment tested. (Worms, 11/93) Kerkhof (MR)
- All sources to be tested. (Acuña Support Plant, 1/94) Kerkhof (GMR)
- Tested annual reporting. (Ludwigshafen, 2/94) Kerkhof (MR)
- All sources estimated. (Rotterdam, 2/94) Kerkhof (MR)

C60712 0180

AIR:

5. All hazardous air pollutant emissions are known along with amount emitted?
(Section V)

- HAP from green mills not known. Should start now to anticipate state and federal toxics regulation. (Wenatchee, 10/92) Byers (**GMR**)
- Not many hazardous air pollutants: NH₃ & HCl. (Northwest Alloys, 11/92) Stroud (**RSI**)
- 1,1,1-TCA generally quantified. May be some small emissions of heavy metals from welding booths, but these are expected to be de minimis in nature. No HAPs inventory prepared. (Burgerhout, 4/93) Lease (**GMR**)
- No determination of HAP emission/potential emissions have been made. Some potential HAPs include Cr compounds from pigments and solvents from laminating lines (film used in laminating is 2-4% wt. solvents). (ABP Denison, 3/93) Waechter (**GMR**)
- HAP program is behind schedule. Implementation of testing plans to meet CAAA Title V permitting requirement will result in a just-in-time collection of data. (Massena, 6/93) Waechter (**GMR**)
- CAA HAPs review completed DEHP + antimony + Mn, Cr. Need to look at review under Virginia's TLV Air Toxics List, rule 5-3. (ABP Stuarts Draft, 8/93) Lease (**GMR**)
- No inventory of HAPs has been completed. Inventory is planned for 1993-1994. (Caradco, 7/93) Waechter (**GMR**)
- No assessment of green mill emissions has been completed to date. Portland plans to complete testing, although no firm schedule/plan has been developed. (Portland, 10/93) Waechter (**GMR**)
- Recent inventory. (Alcoa Electronic Packaging, 10/93) Kerkhof (**MR**)
- Have completed a partial inventory but have not included coatings/paints used in run-through trial for base coaters and decorators. Inventory is incomplete. (Ragsdale Machinery, 8/93) Waechter (**GMR**)
- Process/Sources have not been evaluated for HAPs. New NeR requirements passed in April (will be implemented 1994-1996). Have std. for HAPs. (Drunen, 12/93) Waechter (**GMR**)
- No testing done to date - estimates prepared for some parameters. May be picked up in upcoming source characterization. (Pt. Henry/Anglesea, 10/93) Lease (**GMR**)

C60712 0181

AIR:

**6. There is sufficient information on non-controlled or fugitive pollution sources?
(Section VI)**

- Permits not posted and up-to-date. (Vernon Forge, 10/92) Stroud **(GMR)**
- Visible emissions continue to be a problem at green mill stack. Fugitive emissions continue to be a problem at aluminum handling areas. (Wenatchee, 10/92) Byers **(GMR)**
- No data or information is maintained on fugitive emissions. The operations have greatly expanded since the original permit was issued. (ABP Denison 3/93) Waechter **(GMR)**
- Major air pollutants are insignificant (1 shift/d. welding fumes). Fugitive sources are nil, welding exhaust regulation minimal characteristics. (Intransit, 5/93) Lease **(MR)**
- Had not quantified or identified sources of fugitive emissions. (Massena, 6/93) Waechter **(MR)**
- IH measurements indicate high ambient dust levels. (Moralco, 8/93) Kerkhof **(MR)**
- No inventory at time of audit on fugitives. (ABP Stuarts Draft, 8/93) Lease **(RSI)**
- Building not following standard procedure. (Northwest Alloys, 11/92) Stroud **(RSI)**
- Recent inventory. (Alcoa Electronic Packaging, 10/93) Kerkhof **(MR)**
- Alumina unloading/handling, dross cooling, and potroom fugitives should be reassessed. (Pt. Henry/Anglesea, 10/93) Lease **(GMR)**
- No testing, many leaks - "snow all year". (Ludwigshafen, 2/94) Kerkhof **(RSI)**
- No information available. IH tests, dust in the plant. (Rotterdam, 2/94) Kerkhof **(GMR)**

C60712 0182

AIR:

7. Results of stack samplings, excursions, and equipment malfunctions are reported to appropriate regulatory agencies in accordance with reporting regulations? (Section VII)

- Per plant personnel and records reviewed, not all permit limit exceedances are reported. Also, not total coverage (e.g. weekends, etc.), so some not observable. (Arkansas, 10/92) Ritzert **(GMR)**
- Formality of notification is inappropriate. (Northwest Alloys, 11/92) Stroud **(GMR)**
- No stack sampling is performed or calculations made to determine conformance with regulations or permits. Excursions are not reported as required by Texas regulation. (ABP Denison 3/93) Waechter **(GMR)**
- Know regulations, no excursions. (Alcoa Kasei, 8/93) Kerkhof **(MR)**
- Know local requirements, no excursions. (Moralco, 8/93) Kerkhof **(MR)**
- Opacity excursion reporting policy communicated and generally known. (ABP Stuarts Draft, 8/93) Lease **(MR)**
- Not meeting air permit/WT, no interlock back-up incinerator. (Alcoa Electronic Packaging, 10/93) Kerkhof **(GMR)**
- Permit and regulations require reporting and registration of malfunctions. Drunen is unaware of requirement. No mechanism/systems to assure reporting is completed or issues corrected. (Drunen, 12/93) Waechter **(GMR)**
- Unaware of malfunction or notice requirements in permit and regulation. Maintenance outages not reported to agency in accordance with permit. (Mobile, 1/94) Waechter **(GMR)**
- Procedures in place. (Ludwigshafen, 2/94) Kerkhof **(MR)**
- Procedures in place, reports are made. (Rotterdam, 2/94) Kerkhof **(MR)**

C60712 0183

WATER:

1. Environmental management system for water facilities has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section I)

- Responsibilities not clearly defined. Procedures not documented. QA not adequate. (Arkansas, 10/92) Ritzert **(GMR)**
- Technician moved without adequate preparation; reactive mode; laboratory management (quality). (Vernon Forge, 10/92) Stroud **(GMR)**
- Lack of follow-up in 1989 audit recommendations and action plans. (Wenatchee, 10/92) Byers **(GMR)**
- Oil/Water separation to control oil discharge from air compressors installed, but no maintenance/operating procedures in place. Some with rinsewater from lead solder area. Need a more formal program and assignment of responsibilities in water program. (Burgerhout, 4/93) Lease **(GMR)**
- Need to assign management of wastewater treatment to one group or person. Gaps in identifying new wastewater streams noted. Water management system is functioning, but loosely. (Lebanon, 6/93) Lease **(GMR)**
- Facility is subject to stormwater permitting requirements in current mode of operation but no stormwater permit was submitted. Facility is discharging to POTW without authorization. Facility was unaware and/or unclear of the requirement. No systems were in place to evaluate existing regulations and compliance status or plan future compliance. (Alcoa Vinyl Windows, 4/93) Waechter **(RSI)**
- Knowledgeable insight, external support. (Moralco, 8/93) Kerkhof **(MR)**
- POTW Discharge Status needs to be clarified. Stormwater permit application filed but has deficiencies. Need regulatory "grounding" in water. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- Water issues at Paradise Point are related to stormwater and wash pad runoff (i.e., "process water"). Stormwater issue requires final resolution but was addressed in a timely manner. Wash pad runoff was missed by facility personnel but is a minor issue. (Paradise Point, 7/93) Lease **(GMR)**
- Laboratory manpower is too limited. Responsibilities of individuals are not clearly defined. Management system issues were identified in waste minimization program, surface discharge program, drinking water program, and surface impoundment management. (Portland, 10/93) Waechter **(GMR)**
- Knowledgeable for kind of operation, could improve with lab certification and oil/sand trap in stormwater discharge. (Tellig, 11/93) Kerkhof **(MR)**

WATER:

1. Environmental management system for water facilities has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section I) continued

- No clear definition of responsibilities. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Facility personnel are aware of permit requirements but did not demonstrate detailed knowledge and understanding of document submittals (DMRs, questionnaires) and sampling program. (AFL Spartanburg, 12/93) Lease (GMR)
- Storm water, surface water and sanitary authority discharges are not monitored. Location personnel have not been trained on regulatory requirements. Number of changes made to discharge system without evaluating environmental impact. No management system. One (1) engineer spends ~ 2% of time on water issues. (Drunen, 12/93) Waechter (RSI)
- Issues are clearly defined regarding problems with wastewater discharges. Need to move forward with accelerated programs --management needs to push. (Pt. Henry/Anglesea, 10/93) Lease (GMR)
- Knowledgeable, up-to-date program. (Worms, 11/93) Kerkhof (MR)
- Facility has a general stormwater permit and is developing a pollution prevention plan with the help of BU environmental personnel. Responsibilities under permit and pollution prevention plan not clearly established. Management system needs more definition. (Dalton, 1/94) Lease (GMR)
- Good waste water program. No good information on potable water program. (Acuña Cutting Facility, Plants 1-5, Support Plant, 1/94) Kerkhof (GMR)
- Location manager is Environmental manager. Limited knowledge of regulatory and permit requirements has resulted in issues with stormwater permit and unauthorized discharge to local POTW. (Mobile, 1/94) Waechter (GMR)
- Knowledgeable staff, monitoring program. (Ludwigshafen, 2/94) Kerkhof (MR)
- Permit requirements unknown. No monitoring or discharge. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0185

WATER:

**2. All plant outfalls have necessary NPDES permits and are monitored for excursions?
(Section II)**

- Some procedures do not meet permit requirements, e.g., no temperature measurements in sampling compositor. (Arkansas, 10/92) Ritzert **(GMR)**
- GW Sump discharge - not permitted; needs to be evaluated for permitting requirements - not a major issue. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- pH and turbidity limits for discharge to Grant's Run are exceeded frequently. System for monitoring discharge from cooling water system is not completely functional. (Portland), 10/93) Waechter **(GMR)**
- Sanitary permitted and monitored, low risk on upsets. (Tellig, 11/93) Kerkhof **(MR)**
- One (1) unpermitted discharge discovered. Location was unaware of its existence. (Ragsdale Machinery, 8/93) Waechter **(GMR)**
- Permit does not reflect existing operations. No monitoring to determine environmental impact or if permit requirements are met. Samples collected by agency indicate permit requirements are not being met. (Drunen, 12/93) Waechter **(RSI)**
- Equipment reevaluated and repaired. (Worms, 11/93) Kerkhof **(MR)**
- General stormwater permit in place and two rounds of sampling performed in 1993. One (1) non-stormwater discharge identified during audit - permit status requires resolution. (Dalton, 1/94) Lease **(GMR)**
- Currently permit on Giuliani's name, plant is in process of renaming permit. (Ludwigshafen, 2/94) Kerkhof **(MR)**
- No monitoring, chemicals on-site. Permit requirements unknown near waterways. (Rotterdam, 2/94) Kerkhof **(RSI)**

C60712 0186

WATER:

3. Storm water discharges are permitted under final rule requirements? (Section III)

- Determination was made that AVW was not subject to stormwater permit requirement (exemption based on no process material or wastes stored outside uncovered). However wastes (glass and industrial) and municipal wastes are stored outside uncovered. PVC particles observed in stormwater detention basin. AVW must submit application or change its practices. (Alcoa Vinyl Windows, 4/93) Waechter (GMR)
- Need to test and characterize. (Moralco, 8/93) Kerkhof (GMR)
- Application for general permit submitted on time. Appears to have missed some outfalls. Needs review and possibly revisions. (ABP Stuarts Draft, 8/93) Lease (GMR)
- Stormwater permit prepared for Evans Road operation is inaccurate: does not reflect all discharges - collected samples in areas of runoff from other properties. Operations at Chanute Air Force Base have not applied for a stormwater permit as required. (Caradco, 7/93) Waechter (GMR)
- Facility has requested guidance from agency on need for permit. Guidance that they don't need one is counter to regulations. This issue should be formally resolved. (Paradise Point, 7/93) Lease (GMR)
- Stormwater permit application submitted is not considered complete since one of the locations to be sampled under the group permit has not yet been sampled (even though many rainfall events have occurred). Stormwater permit application did not accurately reflect outfalls or discharge conditions at all the locations included in the group permit. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- Stormwater permitted, could be improved with oil/sand trap. (Tellig, 11/93) Kerkhof (MR)
- 1990 Review indicated that the facility is not subject to stormwater permit requirements. 1993 Review indicated that a permit was needed due to outside storage of the product. No action plan is in place to submit a permit application. (AFL Spartanburg, 12/93) Lease (RSI)
- Facility has permit for both storm and sanitary. (Viernheim, 11/93) Kerkhof (MR)
- Stormwater permit did not identify all discharges. Sampling not always performed as prescribed in permit. BMP does not contain all elements required by permit. (Mobile, 1/94) Waechter (GMR)
- Have permit from City. (Ludwigshafen, 2/94) Kerkhof (MR)

C60712 0187

WATER:

**4. Liquid discharges to public waste treatment system are adequately monitored?
(Section IV)**

- Only sanitary water. (Allpro, 4/93) Lease (MR)
- Practices at Intherglass facility (hose outside to ground) indicated that plant practices and awareness were not adequate to ensure conformance with regulations. (Intal, 4/93) Lease (GMR)
- Lebanon Works recently tied into local POTW system. No sampling of sanitary wastewater has been performed since tie-in. Lebanon Works is developing periodic monitoring program to establish wastewater characterization of sanitary wastewater. (Lebanon, 6/93) Lease (GMR)
- AVW has not obtained authorization for discharge from glass washing operations to the POTW. (Alcoa Vinyl Windows, 4/93) Waechter (RSI)
- New POTW discharge permit represents new responsibilities and accountabilities for facility personnel that will have to be met to ensure permit conformance. To date no overview training has been completed for personnel associated with sampling, reporting and operation or discharge. No practices for maintaining compliance have been established (Note: no discharge to date - batch process). (Structural Laminates, 5/93) Waechter (GMR)
- Historical data indicates presence of VOCs in process waste water. 1991 POTW permit application lists these VOCs as absent without supporting data. POTW has stated concerns about VOCs in waste water in previous correspondence. (ABP Stuarts Draft, 8/93) Lease (RSI)
- Original permit application does not accurately reflect materials (volume or type) that were or are being discharged. No written authorization could be located on site and personnel were unaware if it had been given. A number of new discharges (i.e., spray paint booth, H2O curtain, etc.) have been added with only verbal approval from POTW. (Caradco, 7/93) Waechter (RSI)
- Only sanitary. No complaints from POTW. (AFL - Del Rio, 11/93) Kerkhof (MR)
- Sampling procedures used by the consultant need to be reviewed for conformance with permit conditions. Labels used for analysis of samples should be evaluated for proficiency. (AFL Spartanburg, 12/93) Lease (GMR)
- Indirect discharge permit does not identify all sources of discharge to POTW. Monitoring not performed as mandated by permit. Water discharged (per agency sampling) had pH of 13.3. This could impact operations of POTW. (Drunen, 12/93) Waechter (RSI)

C60712 0188

WATER:

**4. Liquid discharges to public waste treatment system are adequately monitored?
(Section IV) continued:**

- Discharges to POTW, past upsets, changes to system, OK now. (Worms, 11/93) Kerkhof (MR)
- Water treatment on site of transfer station, just under commissioning. (Acuña Transfer Station, 1/94) Kerkhof (N/A)
- No authorization to discharge contact cooling water to POTW. Local, state, and federal general pre-treatment requirements not assessed. (Mobile, 1/94) Waechter (RSI)
- New sanitary system, approved by City -- approximately one year old. (Ludwigshafen, 2/94) Kerkhof (MR)

C60712 0189

WATER:

5. On-site industrial waste treatment plant? (*Section VI*)

- Question modified: "On-site industrial waste treatment plant properly operated and maintained?" Training minimal; temporary personnel. (Vernon Forge, 10/92) Stroud (GMR)
- Sanitary waste system, external support. (Moralco, 8/93) Kerkhof (MR)
- Regular visits, no complaints. (Alcoa Electronic Packaging, 10/93) Kerkhof (MR)
- Problems with operation of wastewater treatment. Facilities in past and at time of audit led to this score. (Specific areas referenced in Observations.) (Pt. Henry/Anglesea, 10/93) Lease

C60712 0190

WATER:

6. All surface impoundments have stable dike system? (Section VII)

- There has been previous dike collapse. No records of inspections. "Known" integrity problems at some points. (Arkansas, 10/92) Ritzert (GMR)
- All surface impoundments (Retention Ponds) are managed in accordance with best management practices and regulatory requirements. Retention basin is filling with sediments. Plant sediment samples performed previously indicates high levels of F and hydrocarbons. However, no further sampling. (Portland, 10/93) Waechter (GMR)
- Evaluation as part of IH program. (Worms, 11/93) Kerkhof (GMR)
- Mud lake dikes tested, dikes reinforced, some sliding noticed. (Ludwigshafen, 2/94) Kerkhof (GMR)

C60712 0191

WATER:

7. Groundwater monitor well system well designed? (Section VIII)

- No comprehensive groundwater monitoring system. Existing wells marginally adequate for facility. (Arkansas, 10/92) Ritzert **(GMR)**
- Need follow-up on environmental assessment findings. (Vernon Forge, 10/92) Stroud **(GMR)**
- No mechanism for reporting malfunctions of equipment. If malfunctions are significant enough that they are brought to the attention of the Environmental Department, they are reported. (Massena, 6/93) Waechter **(MR)**
- Groundwater monitoring well installation on Blakely Island. (Mobile, 1/94) Waechter **(MR)**
- Wells around mudlake OK. Discussion with previous owner on proceeding on deep wells. (Ludwigshafen, 2/94) Kerkhof **(MR)**
- Wells on-site, one-time sampling; construction OK. (Rotterdam, 2/94) Kerkhof **(MR)**

C60712 0192

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

1. Environmental management system for solids disposal has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation; and internal verification for quality performance? (Section I)

- Lack defined responsibilities. Little documentation. No good system of verification on QA. (Arkansas, 10/92) Ritzert (GMR)
- Paint shop soils; solvent waste rags; 1,1,1 in power plant; carburetor cleaner in truck shop. (Rockdale, 12/92) Millett (GMR)
- Training requirement for hazardous waste management inadequate. 21 items of compliance questions were found. (Wenatchee, 10/92) Byers (RSI)
- Documentation of waste disposal practices needed improvement. Facility used neighboring facility's bulk tank for disposal of used oils (small quantities). Records were missing or not easily retrieved. (Allpro, 4/93) Lease (GMR)
- Wastes are handled by each area of plant where they are generated, but no written program is in place. Regulatory knowledge among supervisors with regard to waste management is not strong. Wastes get to right place for disposal but there is a need for documentation and training. (Burgerhout, 4/93) Lease (GMR)
- No job descriptions. (ABP Denison, 3/93) Waechter (RSI)
- More Line Management support and diligence is needed to make programs work on the floor. (Lebanon, 6/93) Lease (GMR)
- Disposal of paint wastes and oil dry not through licensed contractor. Very small volumes generated annually. Need to contract disposal directly with licensed contractor. (Intransit, 5/93) Lease (GMR)
- No systems were in place to segregate, identify or classify waste/hazardous waste. Facility was unfamiliar with requirement. Transporter and TSD facility managing hazardous wastes were not audited. (Alcoa Vinyl Windows, 4/93) Waechter (RSI)
- No clear definitions, internal verification insufficient. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Mischaracterization of wastes is the result of failures in recordkeeping system that identifies wastes into waste storage area and reliance on contractor to characterize wastes without enough knowledge of on-site personnel to check classification. Unfamiliarity with state regulations has lead to a number of recordkeeping and reporting omissions/errors. (Structural Laminates, 5/93) Waechter (GMR)

C60712 0193

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

1. Environmental management system for solids disposal has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation; and internal verification for quality performance? (Section I) continued

- Waste collection by MKC. (Alcoa Kasei, 8/93) Kerkhof (GMR)
- Follow-up on contractor disposal. (Moralco, 8/93) Kerkhof (GMR)
- SQG - working toward achieving CESQG status. Waste management program in place but needs work to make it more effective and close gaps. (ABP Stuarts Draft, 8/93) Lease (GMR)
- Program to characterize waste streams and select proper disposal options is needed. All waste (except for liquids) are disposed as municipal waste. Possibility exists for improper waste disposal to be taking place. (Paradise Point, 7/93) Lease (RSI)
- ARC has no systems to assure that locations have chosen appropriate generator status or are meeting state or federal requirements for hazardous or solid waste disposal (Regulations have not been reviewed against operations.). Location management of waste varies. Facility personnel have not received training. (Alcoa Recycling Company, 5/93) Kerkhof (RSI)
- Additional training in waste characterization labeling and manifesting needed to ensure proper handling, storage and shipment of hazardous wastes generated on site. Facility exceeded CESQG status three months in 1993 and didn't know it. (AFL - Houston, 11/93) Lease (GMR)
- Knowledgeable in combination with Worms. Impressive MSDS system. (Tellig, 11/93) Kerkhof (MR)
- Deficiencies were noted in areas of waste characterization and training. An upgraded program is necessary in these areas to assure full conformance. The facility is in compliance with major regulation requirements. (AFL Spartanburg, 12/93) Lease (GMR)
- A written solid/hazardous waste program was developed. However, it is not always followed. A number of hazardous wastes have been incorrectly characterized as hazardous and a number of others are potentially hazardous. (Ragsdale Machinery, 8/93) Waechter (GMR)

C60712 0194

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

1. Environmental management system for solids disposal has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation; and internal verification for quality performance? (Section I) continued

- Bits and pieces of management system are present. No internal verification/documentation systems for waste characterization. Labeling requirements are not being met. Personnel responsible for waste management/handling require additional training. (Drunen, 12/93) Waechter (GMR)
- Facility has assigned person, knowledgeable. (Viernheim, 11/93) Kerkhof (MR)
- Basic knowledge available on central level. Lack of training. Flaws in labeling. (Acuña Cutting Facility, Plants 1-5, 1/94) Kerkhof (GMR)
- Lack of knowledge or requirements has resulted in misclassification or lack of documentation of classification of wastes. Also in disposal at unaudited facilities. (Mobile, 1/94) Waechter (GMR)
- Requires additional training. (Ludwigshafen, 2/94) Kerkhof (GMR)
- Program in place; mixing of wastes. (Rotterdam, 2/94) Kerkhof (GMR)

C80712 0195

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

2. Plant has submitted "Notification of Hazardous Waste Activity Form" to its RCRA-authorized agency, showing all hazardous wastes and hazardous waste activities? (Section III)

- Question modified: "Plant has identified all hazardous and industrial wastes and hazardous industrial waste activities? (Section II & IV)" (Pinjarra, 10/92) Boyt (MR)
- Parallel is Dangerous Goods Transportation. (Wagerup, 10/92) Hittner (MR)
- Hazardous waste activities appear to have been identified but industrial waste activities not consistent with permit requirements. (Wenatchee, 10/92) Byers (GMR)
- Needs updating. (Lebanon, 6/93) Lease (GMR)
- Facility had registered notification of waste activity without evaluating generator status or classification of wastes generated. Facility registered as a SQG and subjected itself to certain requirements it was not aware of and potentially not subject to. (Alcoa Vinyl Windows, 4/93) Waechter (GMR)
- Notification form filed, one shipment had additional waste codes listed that weren't on the Notification form. Need to determine what waste codes are being generated. (ABP Stuarts Draft, 8/93) Lease (GMR)
- Contractor has been filling out Notification forms (in most cases incorrectly). Location personnel with no training are signing the forms. In many instances wastes were not properly characterized. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- State requirement (ARF) for revising list of waste generated needed to be updated. (AFL Spartanburg, 12/93) Lease (GMR)
- Notification of oil recycler, paperwork in place. (Rotterdam, 2/94) Kerkhof (MR)

C60712 0196

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

3. Facility has a training program for each job position related to hazardous waste management and training is documented? (Section III)

- Training records do not show job titles, etc. (Northwest Alloys, 11/92) Stroud (GMR)
- Need to review new procedures for waste handling as per question #1. Awareness needs to be upgraded. (Lebanon, 6/93) Lease (GMR)
- Need more focused training. (ABP Stuarts Draft, 8/93) Lease (GMR)
- Baseline RCRA training is needed for site personnel so they are aware of waste disposal practices and general RCRA regulations (e.g., empty container management, used oil, etc.). (Paradise Point, 7/93) Lease (GMR)
- Facility has not segregated or classified any hazardous wastes. However a notification of hazardous waste activity was filed that identified the location as a SQG and subject it to training requirements. Due to contradiction in actual status and requirements, Question 2 was used to score entire section governing generator requirements. Answering scoring Question 2 would be redundant. (Alcoa Vinyl Windows, 4/93) Waechter (N/A)
- Exempt by SIC code. (AFL - Del Rio, 11/93) Kerkhof (MR)
- People have been trained and showed good knowledge. (AFL - Del Rio, 11/93) Kerkhof (MR)
- Clear instructions. (Tellig, 11/93) Kerkhof (MR)
- Regular employees OK. Temps? (Alcoa Electronic Pkg, 10/93) Kerkhof (GMR)
- Training content is poor, not all personnel are trained. Job descriptions are need for more personnel. People who had not been trained were signing manifests. (AFL Spartanburg, 12/93) Lease (RSI)
- Have initiated training for personnel handling management of waste from satellite area to storage area (not yet complete). Training also required for management at point of generation (not planned). (Drunen, 12/93) Waechter (GMR)
- Waste handlers knowledgeable. Operators need training. (Worms, 11/93) Kerkhof (GMR)
- Informal and partial training. (Acuña Support Plant, 1/94) Kerkhof (GMR)
- Additional training required. No records. (Ludwigshafen, 2/94) Kerkhof (GMR)
- Informal training, no records. General understanding. (Rotterdam, 2/94) Kerkhof (GMR)

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

4. All hazardous waste container areas have appropriate permit/status and are properly operated? (Section IV)

- No adequate storage area for drums. No documented inspections. See Finding #5, which states additional reasons why Arkansas Operations does not have a comprehensive Solid/Hazardous Waste Management Program. (Arkansas, 10/92) Ritzert (RSI)
- Improper/no labels at painting areas. (Rockdale, 12/92) Millett (GMR)
- Purchase Material Control System not adequate. Results in unidentified waste. (Northwest Alloys, 11/92) Stroud (GMR)
- A satellite (at A398 area) accumulation area contained open container for possibly >90 days. (Wenatchee, 10/92) Byers (GMR)
- No permit required. Operating procedures could not be found. Need written program. (Burgerhout, 4/93) Lease (GMR)
- Container management at the Intherglass facility was largely uncontrolled. No inventory existed and access was not restricted, resulting in potential mixture of chemical & municipal waste. Container storage did not meet good management practices (e.g., open lids, no labels). (Intal, 4/93) Lease (RSI)
- Container management practices are in need of improvement. (Lebanon, 6/93) Lease (GMR)
- Labeling of wastes and daily log-in sheet does not accurately reflect material placed in waste storage area. Manifests and landbar forms, on a large percentage of waste shipments, were not accurate due to mischaracterization of waste. Manifest tracking systems require some slight adjustments. (Structural Laminates, 5/93) Waechter (GMR)
- Satellite Accumulation Areas are not operated to meet regulatory requirements. At times are not removed within the 3-day time requirement and locations with storage of more than 55 gallons were noted. (Massena, 6/93) Waechter (GMR)
- Needs labeling. (Railroads, 8/93) Kerkhof (RSI)
- Improved labeling is needed. Conduct and document inspections. (ABP Stuarts Draft, 8/93) Lease (GMR)

C60712 0198

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

4. All hazardous waste container areas have appropriate permit/status and are properly operated? (Section IV) continued

- Not managed as hazardous waste storage areas at present since facility believes that mineral spirits are excluded due to recycling exemption. (AlcoTec, 9/93) Lease (RSI)
- Note: CESQG status exempts them from most regulations, but they do use BMP for those wastes they handle as hazardous (e.g., batteries). (Paradise Point, 7/93) Lease (MR)
- Containers were not labeled or properly identified at a number of operating locations. No instructions for container management or labeling had been provided. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- Hazardous waste storage area is located on plant property and is not inspected. Drums in satellite accumulation area were not properly identified or stored. (Caradco, 7/93) Waechter (RSI)
- Storage area had two drums which were improperly labeled. Training should correct these errors; storage area should be moved and made into a "distinct" storage area for hazardous waste. (AFL - Houston, 11/93) Lease (GMR)
- One drum uncontained, with insufficient label.(AFL-Del Rio,11/93) Kerkhof (GMR)
- Waste container access is not controlled. Waste not clearly identified in some instances. Three-sided containment. (Portland, 10/93) Waechter (GMR)
- Well-equipped. (Tellig, 11/93) Kerkhof (MR)
- Close to property line. Small amounts of unidentified waste. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Not all wastes have not been correctly characterized. No documentation is maintained to show generation rates qualify Ragsdale as an SQG. (Ragsdale Machinery, 8/93) Waechter (GMR)
- Storage area requires upgrading. ~80% of drums unlabeled/unidentified. (Drunen, 12/93) Waechter (RSI)
- Storage area insufficient containment. Plan in place for improvement. (Viernheim, 11/93) Kerkhof (GMR)
- Crowded, a few labeling deficiencies. (Worms, 11/93) Kerkhof (GMR)
- Very well done. (Ludwigshafen, 2/94) Kerkhof (MR)
- Mixing of wastes, waste oil storage. (Rotterdam, 2/94) Kerkhof (GMR)

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

5. Hazardous waste manifests contains complete information? (Section V)

- Some manifests not clear, accurate. (Northwest Alloys, 11/92) Stroud (**GMR**)
- Dangerous Goods Transportation? (Wagerup, 10/92) Hittner (**MR**)
- Documentation of waste shipments required improvement. (Allpro, 4/93) Lease (**GMR**)
- Manifests were submitted by Alcoa-Drunen for Intal wastes. This did not conform with recommended practices since Intal should have completed and submitted the manifests. (Intal, 4/93) Lease (**GMR**)
- Will use voluntary manifest. (Moralco, 8/93) Kerkhof (**GMR**)
- Only 2 (two) ever issued by facility. (Paradise Point, 7/93) Lease (**MR**)
- Manifests were prepared by a contractor who in many instances mischaracterized waste streams. Manifests were signed by trained location personnel who did not understand the implications of signing the manifest. Land disposal restriction forms were not always attached to manifest. No manifest tracking systems were in place. (Alcoa Recycling Company, 5/93) Kerkhof (**RSI**)
- No system to assure manifests are completed for shipments or that they are correctly completed. (Portland, 10/93) Waechter (**GMR**)
- Documentation is OK. (Tellig, 11/93) Kerkhof (**MR**)
- Due to improper classification of some wastes, some manifests were not complete or accurate. This issue has its root cause in waste characterization procedures, which were lacking. (AFL Spartanburg, 12/93) Lease (**GMR**)
- Documentation O.K. (Ludwigshafen, 2/94) Kerkhof (**MR**)
- Paperwork oil recycler OK. (Rotterdam, 2/94) Kerkhof (**MR**)

C60712 0200

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

6. All plant landfills have appropriate state/local permits? (Section VI)

- Question modified: "All plant landfills have appropriate standards?" (Pinjarra, 10/92) Boyt (RSI)

C60712 0201

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

7. RCRA Disposal facilities meet Alcoa standards? (Section VII)

- Note: Industrial non-hazardous wastes going to unaudited site. (Arkansas, 10/92) Ritzert **(MR)**
- Question modified: "Residue Disposal facilities meet Alcoa standards? (Section VIII)" (Pinjarra, 10/92) Boyt **(ER)**
- Dangerous Goods Transportation. (Wagerup, 10/92) Hittner **(N/A)**
- (Re standards:) AVR Chemie - Rotterdam (no audit conducted). Only incinerator in The Netherlands. (Burgerhout, 4/93) Lease **(MR)**
- AVW uses Brokers/Transporters for disposal of municipal and industrial wastes. Facility was unaware of final destination of waste disposal. Transporter and disposal facilities were not audited. (Alcoa Vinyl Windows, 4/93) Waechter **(RSI)**
- [Requires substantial improvement in re] Auditing of disposal sites. (Alcoa Kasei, 8/93) Kerkhof **(RSI)**
- Question modified: "RCRA and Industrial Disposal facilities meet Alcoa standards?" (HCI-Crawfordsville, 9/93) Waechter **(GMR)**
- No BU approval granted. (AlcoTec, 9/93) Lease **(RSI)**
- Industrial Waste Facilities have not been audited in accordance with policy requirements. (Caradco, 7/93) Waechter **(GMR)**
- For 2 (two) manifested shipments. (Paradise Point, 7/93) Lease **(MR)**
- [Generally meets requirements] With the exception of Safety Kleen. None of the Disposal facilities used for industrial or hazardous wastes were audited under Alcoa Mandated Standard. Location personnel chose disposal methods with little input from environmental personnel. (Alcoa Recycling Company, 5/93) Kerkhof **(GMR)**
- Needs to audit disposal facility. (Moralco, 8/93) Kerkhof **(RSI)**
- Long term use, no complaints, no Alcoa auditing. (AFL - Del Rio, 11/93) Kerkhof **(GMR)**
- Permitted, not audited. (Tellig, 11/93) Kerkhof **(GMR)**

C60712 0202

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

7. RCRA Disposal facilities meet Aicoa standards? (Section VII) (continued)

- Question modified: "Industrial and hazardous wastes have been audited/inspected?" (Drunen, 12/93) Waechter (MR)
- Not audited, no information. Government-owned. (Viernheim, 11/93) Kerkhof (GMR)
- Audit program urgently needed. Government controls generally strong. (Worms, 11/93) Kerkhof (GMR)
- Facility has not audited landfill where it sends its industrial waste. (Dalton, 1/94) Lease (GMR)
- USPCI San Antonio, TX has been audited. Is not in regionalization program. Acuña is small quantity generator and a non-U.S. source. (Acuña Transfer Station, 1/94) Kerkhof (MR)
- Not all facilities audited. Although end point was audited (for Safety Kleen waste), intermediate transfer location was not. (Mobile, 1/94) Waechter (GMR)
- No auditing, no information available on site. (Ludwigshafen, 2/94) Kerkhof (RSI)
- Permitted facilities, no information available. Not audited. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0203

WASTES: RCRA HAZARDOUS - INDUSTRIAL:

8. All inactive landfills are closed according to regulations or closure plans have been prepared? (Section X)

- Closure inadequate. See Finding #6 about leachate drainage from old dump site. (Arkansas, 10/92) Ritzert **(RSI)**
- But is only a minor construction landfill. (Pinjarra, 10/92) Boyt **(N/A)**
- Morgan Kommer's team required closure of some sites. (Northwest Alloys, 11/92) Stroud **(GMR)**
- No on-site landfills apart from mudlake. Developing alternatives for use of mudlake. Progress is slow. (Ludwigshafen, 2/94) Kerkhof **(GMR)**

C60712 0204

TOXIC SUBSTANCES:

1. Environmental management system for such toxic substances as PCB's, asbestos and TSCA has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section I)

- Responsibility not clearly defined. Documentation not adequate. (Arkansas 10/92) Ritzert **(GMR)**
- PCB meets requirements. (Rockdale, 12/92) Millett **(MR)**
- Waste manifests inadequately prepared. (Vernon Forge, 10/92) Stroud **(GMR)**
- No PCBs - need an asbestos survey and inventory. (Burgerhout, 4/93) Lease **(GMR)**
- Need to complete PCB sampling, assign and train environmental TSCA Coordinator. (Lebanon, 6/93) Lease **(GMR)**
- TSCA 8(e) and 8(c) notices were posted but no training had been completed for facility personnel. Back-up coordinator was not trained and was unaware of requirements. No mechanism was in place to assure materials purchased were on TSCA inventory. No training had been planned or scheduled. (Alcoa Vinyl Windows, 4/93) Waechter **(GMR)**
- Addressed PCB at transformer replacement. (Alcoa Kasei, 8/93) Kerkhof **(GMR)**
- Knowledgeable asbestos program. (Moralco, 8/93) Kerkhof **(MR)**
- TSCA training for plant personnel needs improvement. Management system is in place but depth is lacking. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- PCB sources tested (<20 ppm). VEPCO transformers tested - 3 OK, 1 unknown. (Paradise Point, 7/93) Lease **(MR)**
- Knowledgeable in combination with Worms. (Tellig, 11/93) Kerkhof **(MR)**
- Good program. No PCBs, no asbestos. (Alcoa Electronic Packaging, 10/93) Kerkhof **(MR)**
- No PCBs on site. Equipment from Massena is tested and documented as non-PCB. (AFL Spartanburg, 12/93) Lease **(MR)**
- Knowledgeable on central level. Suspected materials tested. Transformers certified. (Acuña Cutting Facility, Plants 1-5, 1/94) Kerkhof **(MR)**
- Has PCB program but no asbestos survey. (Ludwigshafen, 2/94) Kerkhof **(GMR)**
- Pro-active - removed asbestos and PCB. (Rotterdam, 2/94) Kerkhof **(ER)**

TOXIC SUBSTANCES:

2. Regulatory Asbestos Containing Material (RACM) involved in a renovation or demolition in amounts above regulatory thresholds was removed according to NESHAP regulations? (Section II)

- No system in place for ensuring proper NESHAB notification requirements have been met. (Wenatchee, 10/92) Byers (GMR)
- No RACM demolition has taken place. (ABP Stuarts Draft, 8/93) Lease (N/A)
- No asbestos survey has been completed in accordance with Alcoa mandated standards. Some areas potentially containing ACM are known to exist. (Caradco, 7/93) Waechter (GMR)
- Question modified: "Location has assessed asbestos status in accordance with Alcoa policy and has implemented appropriate management plans." Ragsdale has completed an Asbestos Survey for its locations. The survey did not identify any asbestos. (Ragsdale Machinery, 9/93) Waechter (MR)
- Question modified: "Asbestos has been identified and managed in accordance with Alcoa's mandated standards?" (Drunen, 12/93) Waechter (MR)

C60712 0206

TOXIC SUBSTANCES:

3. Was at least one person present during the renovation/demolition who had been trained in the provisions of the NESHAP regulations on asbestos and how to comply with them? *(Section II)*

C60712 0207

TOXIC SUBSTANCES:

4. Operation has a storage area where PCB wastes are stored for more than 30 days prior to disposal? (Section III)

- PCB inventory storage of PCB materials, written supplier confirmation. (Moralco, 8/93) Kerkhof (MR)
- Question was rephrased to read as follows: Location is aware of and can document its PCB status and is in conformance with Alcoa's PCB Policy. (Mobile, 1/94) Waechter (MR)

C60712 0208

TOXIC SUBSTANCES:

5. Hydraulic equipment in plant contaminated with PCB liquids? Systems have been cleaned to less 50 ppm level. (Section III)

- Testing of some hydraulic systems is complete and shows levels <50ppm. Several mills have not been tested - mill hydraulic testing should be completed to confirm that hydraulics are <50ppm. (Lebanon, 6/93) Lease **(GMR)**
- PCB status is unknown. Some level of PCBs was identified in a waste sump. The source of the contamination has not been identified. Hydraulic systems (30+ years old) have not been evaluated for the presence of PCBs. Electrical equipment with the exception of utility owned transformers have not been evaluated to determine their PCB status. (Caradco, 7/93) Waechter **(GMR)**
- Location has never had PCBs due to its age and has established an aggressive program to ensure no PCBs are brought on-site in transferred equipment, by waste vendors, etc. (Portland, 10/93) Waechter **(ER)**
- Location has assessed PCB status of hydraulic and electrical equipment in accordance with Alcoa requirements. No levels above 7 ppm detected. (Ragsdale Machinery, 8/93) Waechter **(MR)**

C60712 0209

TOXIC SUBSTANCES:

6. Preparation of annual documents on PCB status as required? (Section III)

- 1991 Disposal Summary not prepared on time. Annual Doc. Total Wt. does not agree with manifest data. See Finding #8 for additional reasons why the facility's PCB waste management program does not include sufficient documentation to meet regulatory requirements and good management practices. (Arkansas, 10/92) Ritzert (RSI)
- Question modified: "PCB status of electrical equipment is known and managed in accordance with Alcoa's mandated standards?" PCB status of electrical equipment cannot be documented. Recently Drunen learned that three transformers owned by local utility contain PCB liquids. Levels not yet known. Alcoa-owned transformer status cannot be documented. (Drunen, 12/93) Waechter (GMR)

C60712 0210

TOXIC SUBSTANCES:

7. All plant employees have been informed on substantial risk of injury to health or the environment as required by TSCA 8(c) and (e)? (Section IV)

- No notices posted, hourly employees interviewed were not aware of system. (Rockdale, 12/92) Millett **(RSI)**
- Salaried personnel have not been trained. (Lebanon, 6/93) Lease **(GMR)**
- No general location for TSCA postings. No TSCA training has been developed or implemented to date. (Massena, 6/93) Waechter **(RSI)**
- Notes on bulletin board, needs formal MSDS. (Moralco, 8/93) Kerkhof **(GMR)**
- Need additional training for plant population. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- Similar program under IH. Impressive MSDS system and communication. (Tellig, 11/93) Kerkhof **(MR)**
- Similar program under IH. (Viernheim, 11/93) Kerkhof **(MR)**
- Facility Manager has had TSCA training. Remaining three employees require training. (Dalton, 1/94) Lease **(GMR)**
- No TSCA training, but notices posted. (Mobile, 1/94) Waechter **(GMR)**
- Industrial Hygiene Program. (Ludwigshafen, 2/94) Kerkhof **(MR)**

C60712 0211

ENVIRONMENTAL MANAGEMENT:

1. Environmental management system has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section II)

- Inadequate documentation of procedures. Responsibilities not defined. See Finding #11 for additional ways in which the current system does not meet requirements. (Arkansas, 10/92) Ritzert (**GMR**)
- Plant programs are not routinely audited. Operating departments do not assume environmental ownership. (Vernon Forge, 10/92) Stroud (**RSI**)
- Plant programs are not routinely audited. Too much fire-fighting as opposed to anticipating and resolving issues. (Vernon Ingot, 10/92) Stroud (**RSI**)
- Documentation on a number of items not available (PSD issue ingot stock); 1989 audit action plan not implemented; verbal understanding with regulatory inspectors not good. (Wenatchee, 10/92) Byers (**GMR**)
- Current operating permit does not conform to facility conditions. No major deficiencies from an environmental standpoint, but an update is needed and plant manager recognizes this. (Allpro, 4/93) Lease (**GMR**)
- Inadequate staffing level to meet facility regulations for environmental management system. Additional resources needed for remediation issues. (Burgerhout, 4/93) Lease (**RSI**)
- Needs to include more line management personnel to take load off of Production Manager. Written program needed to define responsibilities. (Intal, 4/93) Lease (**GMR**)
- Facility uses MKC, Alcoa policies? (Alcoa Kasei, 8/93) Kerkhof (**GMR**)
- Environmental Committee knows regulations, Alcoa Policy, Moralco policy. (Moralco, 8/93) Kerkhof (**MR**)
- Framework in place, fairly recent, lacks depth but functioning at time of audit. Good communication at plant manager staff level. (ABP Stuarts Draft, 8/93) Lease (**GMR**)
- Knowledgeable for this type of operation. Support from Worms. (Tellig, 11/93) Kerkhof (**MR**)
- Specific area recommendations point out need for training and awareness-raising (e.g., RCRA, RPCC response, RCRA waste management). Also, documentation of environmental activities (inspections, phone contacts, etc.) needs to be implemented. General environmental regulation training for plant manager and supervisor is recommended to improve functional knowledge of regulations impacting facility. (Paradise Point, 7/93) Lease (**GMR**)

ENVIRONMENTAL MANAGEMENT:

1. Environmental management system has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section II) continued

- Manpower resources are not sufficient to implement conformance programs. Documentation and verification procedures are not adequate to document conformance with regulatory requirements (i.e., air permit conditions, POTW discharge, SARA reporting). (Caradco, 7/93) Waechter (GMR)
- ARC has recently increased its staff and has developed a plan to begin implementation of development of management systems. However at the time of the audit only a few systems had been developed and were functioning. Systems need to be developed / further developed in the spill management, air, water, and solid and hazardous waste management areas. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- Need to document specific responsibilities/coverage. Additional training is needed for facility personnel to ensure knowledge base is adequate. (AFL - Houston, 11/93) Lease (GMR)
- Development plus implementation of Manual. (AFL - Del Rio, 11/93) Kerkhof (GMR)
- No clearly defined responsibilities, no integral program. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Time allotted to environmental program is insufficient to assure requirements are met. Procedures to document compliance in many instances are not present. Professional is capable but had no previous environmental experience and requires some guidance from experienced personnel/advisors. (Ragsdale Machinery, 8/93) Waechter (GMR)
- Environmental Management responsibilities are delegated to line management personnel. Management system is in early stages of deployment. Roles and responsibilities need clear definition. Executive Environmental Team is a good forum for sharing information. (AFL Spartanburg, 12/93) Lease (GMR)
- Many examples of non-conformance with policy and regulatory requirements and lack of knowledge of environmental impacts. Documentation systems weak or nonexistent. (Drunen, 12/93) Waechter (RSI)
- Plant manager reliable, relies on Worms for expert advice. (Viemheim, 11/93) Kerkhof (MR)
- Newly appointed engineer, basic knowledge. (Worms, 11/93) Kerkhof (GMR)

C60712 0213

ENVIRONMENTAL MANAGEMENT:

1. Environmental management system has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedures; effective documentation and internal verification for quality performance? (Section II) continued

- Lack of training of coordinators. No environmental action plan. (Acuña Cutting Facility, 1/94) Kerkhof (GMR)
- Informal training records, incomplete training. (Acuña Plants 1-5, 1/94) Kerkhof (GMR)
- Good knowledge on central level. Lack of training of coordinator. No formal manager assignment. (Acuña Transfer Station, 1/94) Kerkhof (GMR)
- Location manager is environmental manager and has little training. Is supported by BU Environmental personnel but interface is infrequent. No clear division of responsibilities. (Mobile, 1/94) Waechter (GMR)
- Ad-Hoc character. (Ludwigshafen, 2/94) Kerkhof (GMR)
- Basic knowledge, no responsibilities. No environmental plans. No MSDS. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0214

ENVIRONMENTAL MANAGEMENT:

2. There is an environmental group to advise operations manager and other plant personnel on environmental matters? (Section II)

- Many recent changes. Direction not clear. Communications not working well. (Arkansas, 10/92) Ritzert **(GMR)**
- Does not have adequate forum to discuss needs, anticipate problems. An environmental team would be a way to resolve this problem. (Vernon Forge, 10/92) Stroud **(GMR)**
- Not all accountabilities of plant Environmental manager and NW regional manager are being met. Additional resources needed. (Wenatchee, 10/92) Byers **(GMR)**
- MKC support. (Alcoa Kasei, 8/93) Kerkhof **(MR)**
- Well-organized environmental committee. (Moralco, 8/93) Kerkhof **(ER)**
- Question modified: "There is an environmental individual to advise operations manager and other plant personnel..." (HCI-Crawfordsville, 9/93) Waechter **(MR)**
- Environmental person, lead team, local team. (AFL - Del Rio, 11/93) Kerkhof **(MR)**
- Environmental coordinator and support from Worms. (Tellig, 11/93) Kerkhof **(MR)**
- Environmental person + assistant. (Alcoa Electronic Packaging, 10/93) Kerkhof **(MR)**
- Location has hired EHS manager who spends ~10% of time on environmental issues. Manager is supported by two other persons, spending ~2% and ~40% respectively on env. issues. This equates to ~52% of a full time person. Not adequate to cover issue. (Drunen, 12/93) Waechter **(GMR)**
- Staff designated. Additional training required. (Ludwigshafen, 2/94) Kerkhof **(GMR)**
- Expertise needs to be expanded. Time allocation (25%) questionable. (Rotterdam, 2/94) Kerkhof **(GMR)**

C60712 0215

ENVIRONMENTAL MANAGEMENT:

**3. Operation has necessary training programs for all phases of environmental effort?
(Section II)**

- RCRA training program needs improvement. (Wenatchee, 10/92) Byers (GMR)
- Needs to be a part of Facility Environmental Management Program. (Burgerhout, 4/93) Lease (GMR)
- More training needed in specific program areas. (Intal, 4/93) Lease (GMR)
- Additional training for supervisor and production personnel on waste management is needed to increase awareness of acceptable disposal practices. (Intransit, 5/93) Lease (GMR)
- General training knowledgeable staff. (Moralco, 8/93) Kerkhof (MR)
- Regulation training needed for Environmental Coordinator. Specific training regulation noted in Findings in RCRA, TSCA & RPCC program. (ABP Stuarts Draft, 8/93) Lease (GMR)
- RCRA training has not been completed. Environmental professional requires additional training to raise level of regulatory awareness to assure requirements are met. (Caradco, 7/93) Waechter (GMR)
- Spill training, completion of manual. (AFL - Del Rio, 11/93) Kerkhof (MR)
- Knowledge is available and transferred rather informally but OK for this industry. (Tellig, 11/93) Kerkhof (MR)
- Temporary waste personnel, Operations Manager. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Additional training needs to be provided to Environmental Professional on state/federal regulation requirements. Additional awareness training for location. (Ragsdale Machinery, 8/93) Waechter (GMR)
- Area production personnel will require some additional environmental regulatory/technical training to ensure full understanding of the environmental impact of their operations. (AFL Spartanburg, 12/93) Lease (GMR)
- All environmental personnel have little or no environmental experience or training. (Drunen, 12/93) Waechter (GMR)
- Operator needs identified. Need program for Environmental Engineer. (Worms, 11/93) Kerkhof (GMR)
- Informal training records, incomplete training. (Acuña Plants 1-5, Transfer Station, 1/94) Kerkhof (GMR)

ENVIRONMENTAL MANAGEMENT:

**3. Operation has necessary training programs for all phases of environmental effort?
(Section II) (continued)**

- Additional training is necessary to assure location personnel understand regulatory requirements. (Mobile, 1/94) Waechter **(GMR)**
- No training program for water / air. (Ludwigshafen, 2/94) Kerkhof **(GMR)**
- All managers have basic understanding -- additional training required. (Rotterdam, 2/94) Kerkhof **(GMR)**

C60712 0217

ENVIRONMENTAL MANAGEMENT:

4. There are copies of environmental assessments for all acquisitions, divestitures or property transfer? (Section III)

- Warehouses in Indiana, Ohio and Lebanon were leased after implementation of Environmental Assessment Policy without an environmental assessment being performed. Facility personnel were not aware of Environmental Assessment Policy covering these warehouses. (Lebanon, 6/93) Lease (RSI)
- Audit of warehouse not conducted. (Tellig, 11/93) Kerkhof (RSI)
- Will conduct when leaving empty building. (Alcoa Electronic Packaging, 10/93) Kerkhof (N/A)
- Report Moerdijk. (Rotterdam, 2/94) Kerkhof (MR)

C60712 0218

ENVIRONMENTAL MANAGEMENT:

5. Operations personnel have active interaction with EPA, state and local regulatory authorities? (Section IV)

- Question modified: "Booragoon has active interaction with EPA, state and local regulatory authorities?" (Pinjarra, 10/92) Boyt (MR)
- Systems are not in place to track and influence proposed regulations. (Vernon Ingot, 10/92) Stroud (GMR)
- Not proactive in keeping operating permit up-to-date. Did not appear to actively solicit input from local regulatory agency on facility environmental matters. (Intal, 4/93) Lease (GMR)
- MKC stays abreast, well documented. (Alcoa Kasei, 8/93) Kerkhof (GMR)
- Public communications, fishermen. (Moralco, 8/93) Kerkhof (ER)
- Barker has positive relationship with regulators. (Paradise Point, 7/93) Lease (MR)
- Few, but necessary, contacts. (Tellig, 11/93) Kerkhof (MR)
- Regularly meeting agencies, member of San Diego industrial interest group. (Alcoa Electronic Packaging, 10/93) Kerkhof (MR)
- There is a need for expanded interaction at state levels on the part of Operations personnel. Most state contacts are handled by the AFL Corporate Environmental Manager. Need for regulatory tracking at the operations level. (AFL Spartanburg, 12/93) Lease (GMR)
- Agencies have never visited/inspected site. Aside from infrequent permitting submittals, there has been no direct contact with agency personnel. Facility manager generally unaware of agency contacts and functions. (Dalton, 1/94) Lease (GMR)
- Active working on permitting, resolving mudlake. (Ludwigshafen, 2/94) Kerkhof (MR)
- Good active relation since a few years. (Rotterdam, 2/94) Kerkhof (MR)

C60712 0219

CHEMICAL RELEASE/LAND MANAGEMENT:

1. Environmental management system for chemical release/land management areas such as SARA III, CERCLA, RPCC, tanks and land management has: experienced, trained personnel; clearly defined responsibilities and division of duties; effective documentation and internal verification for quality performance? (Section I)

- Lacks documentation. Inadequate QA. (Arkansas, 10/92) Ritzert (GMR)
- Location has not submitted SARA 312 reports for its two shred facilities. RPCC Plan has not been developed for the Columbia, MD facility and spill reporting procedures have not been developed at other locations where there is a potential for a reportable spill of oil and/or hazardous materials. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- RPCC Plan and upgraded secondary containment needed. (Burgerhout, 4/93) Lease (GMR)
- Facility does not develop its SARA reports. RPCC was developed but needs to be updated and certified by a professional engineer. Facility has no understanding of these issues. (ABP Denison, 3/93) Waechter (RSI)
- Small quantity storage facility, however overall system for release prevention and control needs improvement. (Intal, 4/93) Lease (GMR)
- Update RPCC Plan. Develop better management system for SARA reports. (Lebanon, 6/93) Lease (GMR)
- No RPCC Plan, chemical inventory, enough awareness of requirements to be able to accurately determine applicability. (Alcoa Vinyl Windows, 4/93) Waechter (GMR)
- A number of deficiencies were identified in the facility's RPCC Plan. Location personnel were not familiar with environmental reporting requirements and responsibilities outlined in the Plan to carry it out. Structural Laminates, 5/93) Waechter (GMR)
- Awareness of subject, MKC support. (Alcoa Kasei, 8/93) Kerkhof (GMR)
- No RPCC Plan is in place (under development). SARA 311 reports have not been submitted. Systems were not in place to assure conformance with regulatory requirements. (Caradco, 7/93) Waechter (GMR)
- Need to upgrade facility personnel knowledge in RPCC Plan's implementation and spill containment. (Paradise Point, 7/93) Lease (GMR)
- Question revised to read: "Emergency response planning programs are coordinated with local emergency planning agencies?" (Portland, 10/93) Waechter (MR)
- OK for this type of operation. (Tellig, 11/93) Kerkhof (MR)

C60712 0220

CHEMICAL RELEASE/LAND MANAGEMENT:

1. Environmental management system for chemical release/land management areas such as SARA III, CERCLA, RPCC, tanks and land management has: experienced, trained personnel; clearly defined responsibilities and division of duties; effective documentation and internal verification for quality performance? (Section I) continued

- Good RPCC Plan. (Alcoa Electronic Packaging, 10/93) Kerkhof (MR)
- SARA reports have not been filed. Location does not correctly interpret applicability. No complete inventory had been performed. RPCC Plan has a number of deficiencies and errors. Containment capacities are not adequate. (Ragsdale Machinery, 8/93) Waechter (RSI)
- Primary need is to revise, upgrade and finalize RPCC Plan. (AFL Spartanburg, 12/93) Lease (GMR)
- Spill response/prevention procedures require improvement, higher awareness of permit requirement with respect to releases required. (Drunen, 12/93) Waechter (GMR)
- Facility storage of paint solvents, oils. Plans for improvement, not knowledgeable on adjacent fuel station. (Viernheim, 11/93) Kerkhof (GMR)
- Spill material in place, no RPCC Plan, little pre-planning. (Acuña Cutting Facility, Plants 1-5, Transfer Station, 1/94) Kerkhof (GMR)
- No spill response program. SARA reporting requirements required (312 and 313). Location unaware of RPCC obligations (> 1,320 gal.). (Mobile, 1/94) Waechter (GMR)
- Lacks formal procedures. (Ludwigshafen, 2/94) Kerkhof (GMR)
- Weaknesses in storage of chemicals. Little pre-planning on spills. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0221

CHEMICAL RELEASE/LAND MANAGEMENT:

2. Emergency response planning programs are coordinated with local emergency planning committee (LEPC) and state emergency response commissions (SEPC) under SARA III? (Section II)

- SARA 311 and 312 reports have not been submitted for the Atlanta and Maryville facilities. (Alcoa Recycling Company, 5/93) Kerkhof **(RSI)**
- No written documentation exists. (ABP Denison, 3/93) Waechter **(GMR)**
- No inventory completed to determine applicability of SARA requirements. Complicated by the fact that DEP (Dayton Extruded Products) is contiguous and may need to be evaluated in conjunction with AVW. (Alcoa Vinyl Windows, 4/93) Waechter **(GMR)**
- Arrangements with fire brigade. (AFL - Del Rio, 11/93) Kerkhof **(MR)**
- Arrangement with fire brigade and army base. Regular training. (Tellig, 11/93) Kerkhof **(MR)**
- Location is subject to SARA 311 & 312 reporting. No reports have been submitted. A complete inventory has not been performed to determine the presence of EHS and applicability of 302.30 reporting. (Ragsdale Machinery, 8/93) Waechter **(RSI)**
- LEPC is notified of SARA chemicals stored above TPQ via Tier II report. Draft RPCC plan which describes responses to leaks or spills has not yet been distributed to LEPC. (AFL Spartanburg, 12/93) Lease **(GMR)**
- Arrangements with Giuliani never trained and tested. (Ludwigshafen, 2/94) Kerkhof **(GMR)**
- Arrangement of foreman and fire brigade. (Rotterdam, 2/94) Kerkhof **(GMR)**

C60712 0222

CHEMICAL RELEASE/LAND MANAGEMENT:

3. Personnel have received SARA III Training? (Section II)

- New personnel at power plant not trained within 30 days. (Rockdale, 12/92) Millett (GMR)
- Training agenda has not been kept up with recordkeeping issues. (ABP Denison, 3/93) Waechter (GMR)
- SARA 311 reviews needed. (ABP Stuarts Draft, 8/93) Lease (GMR)

C60712 0223

CHEMICAL RELEASE/LAND MANAGEMENT:

4. Someone is designated to be on-duty or on-call at all times to call the National Response Center (NRC), 800-214-8807, to report the release of a reportable quantity of hazardous substance? *(Section III)*

- No spill reporting procedures have been developed for any of the operating locations even though the potential to spill an RQ exists. One of the locations (Columbia, MD) requires the preparation of an RPCC Plan based on the volume of hydraulic fluid stored on site. No RPCC Plan has been developed. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- Foreman. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0224

CHEMICAL RELEASE/LAND MANAGEMENT:

5. Operation has approved RPCC Plan? (Section IV)

- RPCC Plan contains errors and not signed - not filed appropriately. See Finding #10. (Arkansas, 10/92) Ritzert (RSI)
- RPCC Plan does not conform to corporate guidelines. (Wenatchee, 10/92) Byers (GMR)
- Need RPCC Plan due to storage of 1,1,1-TCA in quantities above RQ. (Burgerhout, 4/93) Lease (RSI)
- It has not been certified by a professional engineer and has sections missing. (ABP Denison, 3/93) Waechter (RSI)
- Storage areas for MCI & Polyol are not properly protected against spills. Small quantity but high risk chemicals need formal plan to control risks. (Intal, 4/93) Lease (RSI)
- Needs to be updated. (Lebanon, 6/93) Lease (GMR)
- No RPCC Plan. Facility manages a number of hazardous materials (spill potential at facility low to medium). RQ to POTW is any quantity spilled. (Alcoa Vinyl Windows, 4/93) Waechter (RSI)
- RPCC Plan is not current and does not meet major oil storage requirement of CWA. New Plan has just been received from consultant and should be finalized by August. (Massena, 6/93) Waechter (GMR)
- No Spill Plan. (Moralco, 8/93) Kerkhof (RSI)
- Spill Plan is in draft form. Key elements are missing from the draft. Spill potential is medium - two 3000 gallon aboveground tanks holding mineral spirits and wood treat, wastes, miscellaneous oils present on site. (Caradco, 7/93) Waechter (RSI)
- Existing 1989 plan out of date, being revised at time of audit. Should develop spill response procedures since formal RPCC Plan is not needed. (AFL - Houston, 11/93) Lease (GMR)
- Plan under development. Assigned personnel, need training. (AFL - Del Rio, 11/93) Kerkhof (GMR)
- No formal plan, has spill capabilities OK for industry. (Tellig, 11/93) Kerkhof (GMR)

C60712 0225

CHEMICAL RELEASE/LAND MANAGEMENT:

5. Operation has approved RPCC Plan? (Section IV) continued

- RPCC Plan has not been certified and contains a number of deficiencies. A revision is being reviewed and the plan is not yet operational. (Ragsdale Machinery, 8/93) Waechter (GMR)
- Plan was being revised at time of audit. Deficiencies noted in audit finding will require another round of revision before the plan can be approved. (AFL Spartanburg, 12/93) Lease (GMR)
- Response plan is not site-specific enough to adequately address emergencies. (Drunen, 12/93) Waechter (GMR)
- No formal plan, materials in place. Basic knowledge, small quantities. (Vierenheim, 11/93) Kerkhof (GMR)
- RPCC Plan prepared in 1991 as BMP. Facility did not need plan under regulations or Alcoa regulations due to small quantities of oil and chemicals stored on site. Facility now needs plan as part of stormwater permit regulations. Existing plan is deficient in some areas and needs to be revised. (Dalton, 1/94) Lease (GMR)
- No RPCC Plan, some pre-planning. PPE deficiencies in spill kit. (Acuña Cutting Facility, 1/94) Kerkhof (GMR)
- No RPCC Plan, some pre-planning. Low risk facility and location. (Acuña Support Plant, 1/94) Kerkhof (GMR)
- No formal plan, some pre-planning with Giulini, has retention basin. (Ludwigshafen, 2/94) Kerkhof (GMR)
- No RPCC Plan, little pre-planning. (Rotterdam, 2/94) Kerkhof (RSI)

C60712 0226

CHEMICAL RELEASE/LAND MANAGEMENT:

6. Operations personnel are familiar with RPCC Plan and can "properly" execute Plan if spill occurs? (Section IV)

- No clear understanding of the definition of releases. (ABP Denison, 3/93) Waechter **(GMR)**
- Plant production personnel responds to spills but are not trained in spill response procedures. (Intal, 4/93) Lease **(GMR)**
- Implementation of Plan requires further training and enhancement. (ABP Stuarts Draft, 8/93) Lease **(GMR)**
- Additional training of production personnel would be beneficial. (AlcoTec, 9/93) Lease **(GMR)**
- Need more training on release response and action under RPCC Plan. Low risk. (Paradise Point, 7/93) Lease **(GMR)**
- Facility personnel should be aware and "literate" with procedures to respond to spills. (AFL - Houston, 11/93) Lease **(GMR)**
- Training needed on spill response procedures to conform with requirements in the RPCC Plan. (AFL Spartanburg, 12/93) Lease **(GMR)**

C60712 0227

CHEMICAL RELEASE/LAND MANAGEMENT:

7. Above ground storage tanks and loading areas have effective secondary containment? (Section V)

- Construction area and potlining leachate area are not adequate to protect from ground contamination. (Rockdale, 12/92) Millett (**GMR**)
- Several small tanks acid, caustic. (Northwest Alloys, 11/92) Stroud (**GMR**)
- Question modified: "Bulk storage and compressor location areas have effective secondary containment?" Oil spillage from air compressors was evident and was not being addressed. Other areas of bulk storage (i.e., drums) O.K. (Allpro, 4/93) Lease (**GMR**)
- Storage shed outside presents issues related to compatibility of materials stored in shed. (ABP Denison, 3/93) Waechter (**GMR**)
- MDI & Polyol storage area needs secondary containment. (Intal, 4/93) Lease (**GMR**)
- MOSF (Major Oil Storage Facility) does not have adequate containment nor does Building 131 acid and caustic tanks. Transformers located on site are not provided with containment. (Massena, 6/93) Waechter (**RSI**)
- Stabilizer OK. Diesel OK. (ABP Stuarts Draft, 8/93)
- Containment is not adequate around a number of port-a-feed tanks from storage areas. (Portland, 10/93) Waechter (**GMR**)
- Inadequate containment capacity has been provided for the 400 gallon waste tanks, and virgin oil and paint storage area's containment capacity for waste storage area is adequate. (Ragsdale Machinery, 8/93) Waechter (**GMR**)
- Oil unloading, HCl and NaOH in boilerhouse, hydrazine storage insufficiently contained, has retention basin. (Ludwigshafen, 2/94) Kerkhof (**GMR**)

C60712 0228

CHEMICAL RELEASE/LAND MANAGEMENT:

8. Disturbed mining area lands and undisturbed land around operating sites managed to conserve natural habitat and biological diversity? (*Section VI*)

C60712 0229

WASTE MINIMIZATION:

1. Environmental management system for waste minimization program has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedure; effective documentation and internal verification for quality performance? (Question I)

- Not much in documented waste minimization activity. Responsibilities not defined. (Arkansas, 10/92) Ritzert (GMR)
- Need working team. (Vernon Forge, 10/92) Stroud (GMR)
- For the most part there is no formal waste minimization program in Areas I & II that address non-hazardous waste. (Massena, 6/93) Waechter (GMR)
- Re-use of big bags, collection of waste alumina. (Alcoa Kasei, 8/93) Kerkhof (GMR)
- Collection of waste alumina, no formal program. (Moralco, 8/93) Kerkhof (GMR)
- Lacking procedures, tracking, measurement system for wastes. No air inventory in plan for minimum emissions. Water recirculation good. (ABP Stuarts Draft, 8/93) Lease (GMR)
- Waste minimization activities are haphazardly taking place but no goals have been established and no documentation procedures are in place. (Caradco, 7/93) Waechter (MR)
- Need to document and track waste generation rates and ongoing practices and programs for reducing waste quantities and eliminating hazardous substances where possible. (Paradise Point, 7/93) Lease (GMR)
- ARC has implemented office recycling programs but has no formal waste minimization program. Solid and hazardous waste streams have not been identified, segregated or reviewed to determine waste minimization opportunities. (Alcoa Recycling Company, 5/93) Kerkhof (GMR)
- Plan under development per B.U. Milestone. (AFL - Houston, 11/93) Lease (GMR)
- Program under development (AFL - Del Rio, 11/93) Kerkhof (GMR)
- Action plans for industrial waste, reductions. (Tellig, 11/93) Kerkhof (MR)

C60712 0230

WASTE MINIMIZATION:

1. Environmental management system for waste minimization program has: experienced, trained personnel; clearly defined responsibilities and division of duties; key action authorization procedure; effective documentation and internal verification for quality performance? (Question 1) continued

- Facility has program, with basic elements and assigned person. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- No waste minimization strategies currently in place with exception of office wastes. (Drunen, 12/93) Waechter (GMR)
- Facility investigating reuse of bulk bags for product shipment. Material loss through facility tracked against milestone. 1993 loss <.25% of throughput. Minimal generation of solid/industrial waste. (Dalton, 1/94) Lease (MR)
- Division plan, no dedicated plant activities. (Acuña Cutting Facility, Plants 1-3, 5, 1/94) Kerkhof (GMR)
- Division plan, plant activities. Works with customer on modifications to reduce waste. (Acuña Plant 4, 1/94) Kerkhof (GMR) Waste compacting at Transfer Station.
- BU goals program in place. (Ludwigshafen, 2/94) Kerkhof (MR)
- Goals defined, no accountabilities. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0231

WASTE MINIMIZATION:

2. Operation has waste minimization program with a goal to reduce liquid and solid wastes 35% by year 1996? (Question I)

- No overall plan. Some good projects but not pulled together. (Arkansas, 10/92) Ritzert (GMR)
- Large portion of plan depends upon developing markets for sale of waste. (Northwest Alloys, 11/92) Stroud (GMR)
- Question modified: "Operation has waste minimization program with a goal to reduce off-site disposal of municipal wastes?" (Intal, 4/93) Lease (MR)
- Question modified: "Operation has waste minimization program with a goal to reduce liquid and solid wastes?" (HCl-Crawfordsville, 9/93) Waechter (MR)
- Facility has achieved significant reduction of wastes. (AlcoTec, 9/93) Lease (ER)
- Major waste minimization/pollution prevention efforts at Paradise Point have been directed at air pollution prevention. Waste minimization efforts are also underway for miscellaneous small quantity chemicals through elimination of hazardous substances where possible. Specific targets have not been set - more documentation is required. (Paradise Point, 7/93) Lease (N/A)
- Action plans for reduction under development/ongoing activities. (AFL - Del Rio, 11/93) Kerkhof (GMR)
- Facility has reduced waste to on-site landfill 50%/year since 1991 and is pursuing a number of unique waste minimization projects--Alcoa Benchmark. (Portland, 10/93) Waechter (ER)
- Target set by California regulations. Program will meet requirements. (Alcoa Electronic Packaging, 10/93) Kerkhof (GMR)
- Recognition for 1,1,1-TCA reduction and solvent reduction in wire coloring operation. (AFL Spartanburg, 12/93) Lease (ER)
- Defined division targets. (Acuña Plants 1-5, Transfer Station, 1/94) Kerkhof (GMR)
- No waste minimization program implemented. (Mobile, 1/94) Waechter (GMR)
- Detailed program. (Ludwigshafen, 2/94) Kerkhof (MR)
- Clear goal on alumina materials but not on other materials. (Rotterdam, 2/94) Kerkhof (GMR)

C60712 0232