Emissions Minimization Plan

Regulation 6, Particulate Matter, Rule 4: Metal Recycling and Shredding Operations

Schnitzer Steel Products Company

1101 Embarcadero West
Oakland, CA 94607

Site #208

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I, as the Responsible Manager of this facility, hereby certify that as of this date, this Emissions Minimization Plan contains all elements and information required of a complete EMP pursuant to District Regulation Section 6-4-403 and that the information contained in this EMP is accurate.

Certified by: _____ *Dated:* 12-17-15

Jon Marlin, General Manager, Oakland Schnitzer Facility

Responsible Manager

Designation of Confidential Business Information

Specify the information you designate is "CONFIDENTIAL" and include specific section(s) and corresponding page number(s). Describe the basis, e.g. the information is trade secret or otherwise exempt under law from public disclosure.

Name of Section / Page Number(s)	Description of Confidential Information

Company Description

The Facility is a scrap metal recovery and recycling [operation] occupying approximately 26.5 acres of flat-lying land adjacent to the Oakland Inner Harbor waterfront and the Port of Oakland. The facility is bounded to the south by the Oakland Inner Harbor, to the east and west by the Port of Oakland, and to the north by Embarcadero West and Union Pacific Railroad tracks. Schnitzer's operations are limited to scrap metal recycling. Schnitzer does not engage in the recycling of secondary materials or wastes other than those that are generated incidentally in the course of scrap metal recycling operations.

Operations at the site include shredding of light iron products including automobiles, appliances, and other recyclable light steel materials; shearing and torch cutting of heavy recyclable heavy melting steel (HMS) products; preparation and sorting of ferrous and non-ferrous metal recycling feedstock; temporary storage of finished recycled metal products, incidental non-metal recyclable products and non-recyclable waste materials, and maintenance of facility equipment. Raw bulk scrap is delivered to the Facility by both rail and truck at the main commercial entrance where it is inspected and sorted.

Incoming bulk scrap metal is segregated into the following material streams:
- "Bonus" HMS material that will be processed by torch cutting into smaller sizes for shipment;
- Standard grade HMS that will be processed by shear cutting into smaller sizes for shipment; and
- Shredder feed material consisting of light iron products including automobiles, appliances and other recyclable light steel materials.

At the shedder, light iron products are shredded so that ferrous metal can be isolated from nonferrous metals and residual non-metallic materials. The intermediate non-ferrous stream resulting from shredding operations is known as non-ferrous raw (NFR), which consists of both non-ferrous metal and non-metallic materials. NFR is processed further in the Joint Products Plant where non-ferrous metal is separated by metal type from non-metallic materials. Upon completion of the non-ferrous separation processes, the non-metallic shredder residue is then treated with cement and silicate, which binds trace remnant metals in the residue to reduce their solubility. The treated shredder residue is transported by truck to off-site disposal locations for use as alternative daily landfill cover.

The processed ferrous scrap is stockpiled at the Facility and is eventually loaded at the Facility's docks into cargo ships for export.

Scrap and non-bulk ferrous/non-ferrous metal scrap are received at the Facility at the Peddler Gate, and are also inspected and sorted. Incoming scrap at the Peddler Gate is weighed, sorted and segregated by hand, into bins by scrap type, and either baled at the non-ferrous building and/or stored in cargo containers for transport by truck offsite.

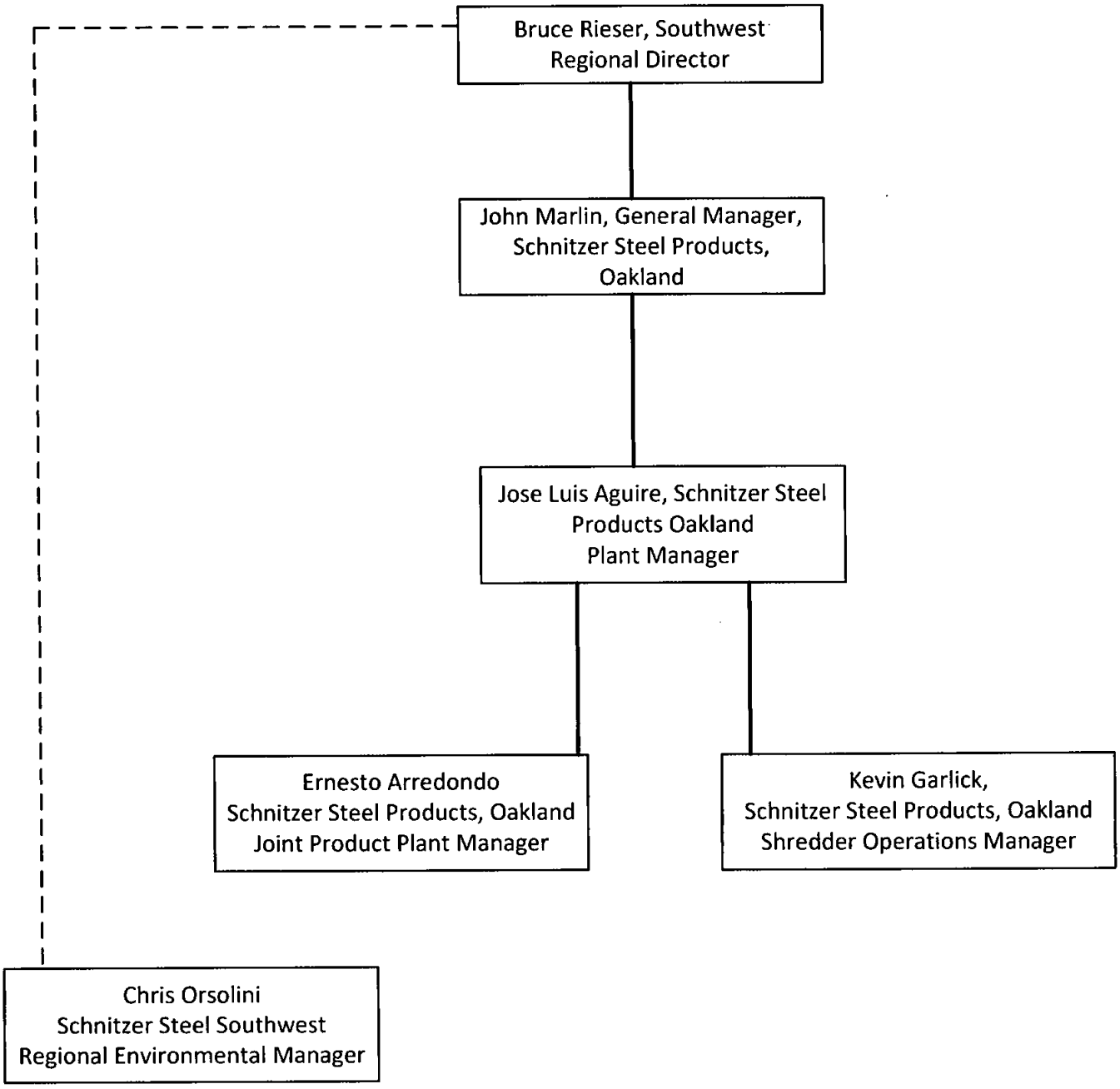
Company Organizational Chart and Schedule of Management Operators
6-4-403.1.3

A. *Company Organizational Chart*- Attach a copy of the organizational chart of the company, which describes the business structure and provides the titles of the positions within the organization.

B. *Schedule of Management Operators* - Provide the names and contact information of the Onsite Responsible Manager(s) and Onsite Alternate Contact(s) and their duty schedule.

A. Company Organizational Chart

Schnitzer Steel Products Oakland Organizational Chart



B. Schedule of Management Operators

Onsite Responsible Manager(s)

Name: Jon Marlin
Title: Facility General Manager
Phone: 510-719-6080
Email: jmarlin@schn.com
Schedule/Shift: Monday through Friday /Variable

Name: Jose Aguirre
Title: Plant Manager
Phone: 510-774-8053
Email: jaguirre@schn.com
Schedule/Shift: Monday through Friday/Variable

Onsite Alternate Contact(s)

Name: Kevin Garlick
Title: Shredder Operations Manager
Phone: 510-719-0632
Email: kgarlick@schn.com, Monday through Friday/Variable
Schedule/Shift:

Name: Ernesto Arredondo
Title: Joint Product Operations Manager
Phone: 916-416-8691
Email: earredondo@schn.com
Schedule/Shift: Monday through Friday/Variable

Name: Chris Orsolini
Title: Regional Environmental Manager
Phone: 916-512-0269
Email: corsolini@schn.com
Schedule/Shift: Variable due to regional responsibilities

Operations Subject to EMP
6-4-402

The EMP shall address all of the following operations that are conducted at a metal recycling and shredding facility per 6-4-402 to reduce fugitive emissions.

Please check all facility operations that apply.

402.1 Roadways and Other Trafficked Surfaces	☒ Yes ☐ No
402.2 Metal Management	☒ Yes ☐ No
402.3 Shredder Residue (SR) Management	☒ Yes ☐ No
402.3 Depollution Operations	☒ Yes ☐ No

Contents of the EMP
6-4-403

The owner or operator of the metal recycling and shredding facility subject to Section 6-4-401 shall prepare a complete and accurate EMP that details the management practices, measures, equipment and procedures that are employed or scheduled to be implemented to minimize fugitive emissions for the operations subject to the EMP.

A. Metal Recycling and Shredding Operations

I. Metal Management- List and provide a description of all process equipment, materials received, processed or stored, abatement and control equipment and monitoring parameters to reduce fugitive emissions. Include a comprehensive list of all abatement and control equipment for operations subject to 6-4-402 and specify the source(s) that it abates.

II. Shredder Residue (SR) Management- Identify the equipment or structures that are used in the management of shredder residue, including the treatment process used to reduce the leaching potential of residual soluble metals in the residue.

III. Depollution Operations- Describe policies and procedures pertaining to: 1) the safe removal of materials from major appliances and vehicles that require special handling prior to crushing or transferring to balers or shredders for recycling; and 2) special handling of these materials if discovered during the recycling process.

B. Scrap Acceptance Policy (6-4-403.3)- Provide and attach a copy of the facility's scrap acceptance policy.

C. Management Practices to Reduce Fugitive Emissions- List and provide descriptions of all management practices conducted to include preventative maintenance activities, pollution prevention, housekeeping and source reduction measures to reduce fugitive emissions of particulates. Include the frequencies or circumstances when these measures and practices are undertaken (schedule of activity).

D. Description of Onsite Management and Schedule of Facility Operations - Describe the onsite management practices of metal recycling and shredding operations to reduce fugitive emissions, including those during business hours and after the close of business. Provide the approximate schedule of operations.

Metal Recycling and Shredding Operations

I. Metal Management

METAL MANAGEMENT

Provide a description of metal management operations which include the receipt, on-site transport, collection, sorting, segregation, separation, compilation, crushing, shredding, and storage of metals, metal-containing materials, and non-metallic materials at a metal recycling and shredding facility. Include all abatement and monitoring parameters that are employed.

Section #	Operation	District S#	Description of Operation	Source Abated	District A#	Abatement Required by Permit	Type of Abatement	Abatement Monitored	Monitoring Parameters
1	Receipt		Incoming scrap metal loads mixed with excessive amounts of soil, trash or debris are rejected unless the scrap metal can be isolated from the incoming load prior to acceptance of the load; soil, trash and debris are rejected.	☒ Yes ☐ No		☐ Yes ☒ No	Visual inspection of incoming loads	☒ Yes ☐ No	Visually observed amount of soil, trash and debris that can become a source of fugitive particulate.
2	Transport		Transport of material is conducted using tractor trailers during delivery (receipt) of material. Internally, material is transported using Terex mine trucks, front end loaders, grapple-equipped material handlers, and conveyor belt systems. (Note: Schnitzer considers Transport and Collection to be similar activities)	☒ Yes ☐ No		☒ Yes ☐ No	Rumble strips are present at the scales at the main entrance and at the entrance to the Pier Crane dock to remove sediment from truck tires. The docks are swept of sediment as needed. Water is sprayed on the ship loading hopper and the pier crane hopper during loading to prevent dust emissions. Water truck sprays all major roadways, paved and unpaved. Sweeper truck cleans all paved roadways. These BMPs remove dirt from truck tires leaving the facility, entering the dock area, and the sweeper removes dirt from dock surface and roads. The water truck wets work surfaces, minimizing the mobilization of dust.	☒ Yes ☐ No	Visual observation of Embarcadero West outside the main gate and on the dock to assure that no excess dust is present. Visual observation to confirm that road cleaning is effective.
3	Collection		Collection of material is conducted using tractor trailers during delivery (receipt) of material. Internally, material is transported using Terex mine trucks, front end loaders, grapple-equipped material handlers, and conveyor belt systems. (Note; Schnitzer considers Transport and Collection to be similar activities)	☒ Yes ☐ No		☒ Yes ☐ No	Water truck sprays specific loads (e.g. some construction waste loads) in transporting trucks. Dust Boss waters collection pile (out 200 feet) in front of shredder. Water spray reduces potential dust.	☒ Yes ☐ No	Visual observation for dust
4	Segregation		Segregation of material involves stockpiling different grades of ferrous metal such as prepared HMS, unprepared HMS, Bonus grade HMS, and Shredder Infeed Material. Tractor trailers and rail cars deliver most material. Metal is transported internally using Terex mine trucks, material handlers, and conveyor belt systems.	☒ Yes ☐ No		☒ Yes ☐ No	Water truck sprays HMS and Bonus loads carrying heavy rust coating. Water spray reduce potential dust.	☒ Yes ☐ No	Visual observation for dust

5	Separation	6	Separation involves processing downstream from the shredder, utilizing a magnetic drum to separate ferrous metal from Non-Ferrous Aggregate. Additionally, recoverable non ferrous and ferrous metal is separated from Non Ferrous Aggregate in the Joint Product Plant.	☒ Yes ☐ No	2, 3, 4, 5, 6, and 9	☒ Yes ☐ No	Shredder infeed material is wetted thoroughly in the shredder as it is conveyed to the rotating magnetic drum. The Joint Product plant employs several BMPs to minimize the potential for emissions: covered conveyors, high water content of product, misting of the Joint Product Plant area with a Dust Boss water turbine. Water spray system (A6), simple cyclone (A2), irrigated cyclone scrubber (A3), moving belt dry filter (A4), simple cyclone (A9), and mist eliminator (A5) also apply here.	☒ Yes ☐ No	Visual observation for dust
6	Compilation		Compilation includes the stockpiling of finished shredded ferrous metal. This is transported via a conveyor belt to the shred storage pile.	☒ Yes ☐ No		☒ Yes ☐ No	Water spray: Shredded product storage pile is water spray-controlled by two Dust Boss machines and a Rainbird sprinkler at conveyor discharge.	☒ Yes ☐ No	Visual observation for dust.
7	Crushing		This facility operates no crushing equipment.	☐ Yes ☐ No		☐ Yes ☐ No		☐ Yes ☐ No	
8	Shredding	6	Shredding is the feeding of light iron and tin (shred feedstock) into a hammer mill that reduces the size of the material into 4-inch or less fist size chunks of ferrous metal and non-ferrous aggregate.	☒ Yes ☐ No	6, 2, 3, 4, 9, and 5	☒ Yes ☐ No	District Source #6 at this facility is abated by the following District-required abatement devices: Water spray system (A6), simple cyclone (A2), irrigated cyclone scrubber (A3), moving belt dry filter (A4), simple cyclone (A9), and mist eliminator (A5).	☒ Yes ☐ No	Water spray system total consumption per shift and water use recorded. Periodic observations are made for non-steam visible emissions.
9	Storage of metals		Storage of metals includes the stockpiling of unprocessed metals, intermediate process metals, and finished products. Storage of metals including size, location, and number of stockpiles is dynamic, and can vary greatly from week to week.	☒ Yes ☐ No		☒ Yes ☐ No	Water truck spraying and/or Dust Boss Water Mist Turbines are used to wet stored material to prevent generation of dust when loaded on to trucks carrying product to shipping pier or for processing.	☒ Yes ☐ No	Visual observation to detect any escaping fugitive dust.

METAL MANAGEMENT

Provide a list of the metals received and/or processed at facility.

Section #	Name of Metal or Metal Alloy
1	Steel
2	Stainless Steel
3	Copper
4	Brass
5	Bronze
6	Aluminum
7	Cast Iron
8	Tungsten
9	Titanium
10	Iron Based Alloys

METAL MANAGEMENT

Identify the storage piles and the types of metal and metal-containing material being stored. Include whether any monitoring is conducted and detail the monitoring parameters and equipment used to minimize fugitive emissions.

Section #	Description of Material	MONITORING			
		Monitoring Conducted	Monitoring Parameters	Monitoring Equipment	If Yes: Identify Monitoring Equipment Used
Storage of Delivered Scrap					
1	Shredder infeed storage pile-Ferrous Material	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
2	HMS Product Storage Piles (1) & (2), and Bonus Product Storage Pile - Ferrous Metal	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
3	HMS material to be sheared pile-Ferrous Metal	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
4	Non-ferrous storage	☐ YES ☒ NO	No fugitive dust monitoring required because inside Joint Products Plant building	☐ YES ☒ NO	
Storage of Unprocessed Material					
5	Shredder infeed storage pile-Ferrous Metal	☒ YES ☐ NO	Monitoring for visible dust emissions	☐ YES ☒ NO	
6	Non-ferrous storage	☐ YES ☒ NO	No fugitive dust monitoring required because inside Joint Products Plant building	☐ YES ☒ NO	
7	HMS Product Storage Piles 1 and 2 and Bonus storage (Same as Section 2 above)	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
8	Unprocessed HMS product storage (Material to be sheared)- Ferrous metal (Same as Section 3 above)	☐ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
Storage of In-process Material					
9	Non-ferrous raw storage piles (two)- Non Ferrous Metal and Non-Metallic Components of Shredder feedstock	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
		☐ YES ☐ NO		☐ YES ☐ NO	
		☐ YES ☐ NO		☐ YES ☐ NO	
		☐ YES ☐ NO		☐ YES ☐ NO	
Storage of Finished Product					
10	HMS Product Storage Piles 1 and 2. (Same ferrous metal piles as in Section 2 above)	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
11	Non-ferrous material storage and loading area.	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
12	Shredded product storage and excess product storage (Can be Bonus product or HMS product) - All ferrous metal.	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
13	Zorba storage (aluminum)	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	
Storage of Shredder Residue					
14	Treated shredder residue storage pile-Predominantly	☒ YES ☐ NO	Monitoring for visible dust emission.	☐ YES ☒ NO	

	non-metallic residual of shredder feedstock.				
		☐ YES ☐ NO		☐ YES ☐ NO	
		☐ YES ☐ NO		☐ YES ☐ NO	
		☐ YES ☐ NO		☐ YES ☐ NO	

ABATEMENT AND CONTROL EQUIPMENT

Provide a comprehensive list of all District-permitted abatement and control equipment to reduce emissions.

Section #	Abatement Equipment	District A#	Name of Source(s) Abated and District Source #(s)
1	Water spray system	A6	S6 Steel shredder; S7 Steel infeed conveyor
2	Simple cyclone	A2	S6 Steel Shredder; S7 Steel Infeed Conveyor
3	Irrigated cyclone scrubber	A3	S6 Steel Shredder; S7 Steel Infeed Conveyor
4	Moving belt dry filter	A4	S6 Steel Shredder; S7 Steel Infeed Conveyor
5	Simple Cyclone	A9	S6 Steel Shredder; S7 Steel Infeed Conveyor
6	Mist eliminator	A5	S6 Steel Shredder; S7 Steel Infeed Conveyor
7	Baghouse, pulse jet	A10	S10 Fly ash silo

Metal Recycling and Shredding Operations

II. Shredder Residue (SR) Management

SHREDDER RESIDUE (SR) MANAGEMENT

Describe the equipment or structures used for conveyance, storage and treatment of shredder residue (SR) during the recycling process. Include measures to minimize fugitive emissions.

Section #	Equipment or Structure for Processing SR	District S#	SR Stored in an Enclosed Area	MONITORING		SR ADDITIVE	
				Monitoring Conducted	Monitoring Parameters	Use of SR Additive	Type and Purpose of Additive
1	Joint Product Plant		☐ Yes ☒ No	☒ Yes ☐ No	Monitoring for visible dust emissions.	☐ Yes ☒ No	
2	Treated Shredder Residue Storage Pile		☐ Yes ☒ No	☒ Yes ☐ No	Monitoring for visible dust emissions.	☒ Yes ☐ No	Shredder residue is given a final treatment with water, polysilicate solution, and Portland cement. This mixture chemically fixes residual soluble metals, reducing their leachability in landfills. The high residual moisture content due to the addition of water helps to minimize potential fugitive dust.
			☐ Yes ☐ No	☐ Yes ☐ No		☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No		☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No		☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No		☐ Yes ☐ No	

Metal Recycling and Shredding Operations

III. Depollution Operations

DEPOLLUTION OPERATIONS

List all materials that require special handling and removal in depollution operations.

Section #	Materials Requiring Special Handling or Removal
1	Depollution of appliances occurs under limited circumstances by a DTSC/EPA licensed contractor. Applicances include refrigerators, stoves, washing machines, clothes dryers, and dishwashers, which are depolluted of capacitors, ballasts, mercury switches, oils, batteries, CFCs, HCFCs, and all refrigerants or other hazardous materials.

DEPOLLUTION OPERATIONS

Describe the policies and procedures pertaining to the safe removal of materials from major appliances and vehicles that require special handling prior to crushing or transferring to balers or shredders for recycling. Include the measures that are implemented when these materials are discovered during the recycling process.

Schnitzer Steel does not regularly depollute material at our Oakland facility. We only accept scrap that has been properly depolluted prior to shipment to our site.

Schnitzer Steel will occasionally accept intact appliances from large commercial accounts for recycling. Schnitzer hires a certified appliance recycler contractor to properly depollute these appliances. Certified appliance recyclers must have an EPA identification number for hazardous waste and be approved by the California Department of Toxic Substances Control (DTSC) to depollute appliances. This third party, EPA/DTSC certified contractor removes any hazardous materials and properly disposes of the material.

Schnitzer cannot predict with any certainty how often certified appliance recyclers will be onsite to depollute appliances. We generally do not accept intact appliances at our facility, and only accept depolluted appliances from most customers. The Certified Appliance Recycler Contractor will conduct all depollution activities and will be onsite during all depollution activities because the contractor is the entity performing the depollution activities, not Schnitzer employees.

Schnitzer Steel contracts with Freon Free, a Certified Appliance Recycler, DTSC # 0111:

Freon Free

2350 S Watney Way Fairfield, CA 94533

(707) 429-9013

Although Schnitzer Steel does not accept appliances that have materials requiring special handling (MRSH), when suspect material is discovered in a load, it is preferentially rejected and returned to the customer. If suspect material were discovered after a load delivery, it would be segregated and either depolluted by a Certified Appliance Recycler or the material would be profiled for disposal by Schnitzer Steel.

All MRSH discovered that is not rejected by Schnitzer will be profiled for disposal according to all federal and state regulations and sent to a facility that is authorized to accept the waste.

Scrap Acceptance Policy

SCRAP ACCEPTANCE POLICY

Attach a copy of facility's Scrap Acceptance Policy.

Estimado Cliente:

Este folleto servira para aclarar nuestras normas acerca de cuales metales reciclables aceptamos. Estos requerimientos son un reflejo de nuestro compromiso hacia un comportamiento responsable al medioambiente. Por favor recuerde que muchas de nuestras normas son controladas por regulaciones ambientales a nivel federal y estatal, que son aplicables tanto a nuestra empresa como a nuestros clientes. Esta lista no incluye todo; otros artículos que no aparecen aquí, pueden ser inapropiados para reciclar como chatarra. Cualqier excepcion a estas normas debera ser pre-aprovada.

Por favor lea este folleto cuidadosamente, y para cualquier pregunta contacte a nuestro Gerente Comercial, Steve Blackman en el telefono (510) 425-6377.

Recuerde que tenemos el derecho de rechazar cualquier cargamento, al costo del cliente, si no cumple con esta guia.

Los siguientes materiales NO SERAN aceptados en nuestras instalaciones:

- *Mercurio* (22 CCR 66260.10).
- Virutas de *berilio* y *magnesio* capaces de ser auto combustible (22 CCR 66260.10).
- Metales que reaccionan con el agua, incluyendo sodio, potasio y litio (22 CCR 66260.10).
- Tarjetas de circuito sacados de residuos universales (22 CCR 66260.10).
- Polvos metalicos muy finos (que tengan tamano de particula menor de 100 micrones) (22 CCR 66260.10).
- Metal contaminado con desechos peligrosos.
- Metal que contenga cualquier aceite de flujo libre.
- Filtros de aceite.
- Baterias de uso domestico, tal como alcalino, niquel-cadmio, y litio.
- Asbestos, o materiales conteniendo asbestos, tal como el aislamiento de *tuberia y material de superficie* comunmente encontrado en vigas, tanques, y otros restos estructurales y de *demolicion* (40CFR 61.150).
- Articulos que contienen o han contenido PCBs, incluyendo capacitores chicos, balasto de luz fluorescente, y *transformadores* electricos o componentes de transformador (TSCA y 40 CFR 258 y 261).
- Aceites, gasolina, propano, y otros productos de petroleo tal como fluidos hidraulicos, aceites de engranajes, y grasa. Tambien el anticongelante y otros liquidos de flujo libre, incluyendo el agua.
- *Unidades de aire acondicionado o refrigeracion* conteniendo CFCs o HCFCs (40 CFR82).
- Bolsas de aire de automoviles que contienen azida de sodio (40 CFR 261) o perclorato.
- Latas de estano.
- Vehiculos recreativos o casa de motor.
- Latas, barriles u otros contenedores que hayan contenido restos peligrosos que no cumplen con la definicion de "contenedor vacio."
- *Luces fluoroscentes, neon, luces de alta intensidad* o luces de vapor mercurio.
- CRTs (tubos de rayos catódicos) incluyendo TVs, monitores, tocadores de DVD portátiles.
- Cualquier material conteniendo sustancias peligrosas o *toxicas, plaguicidas, etc.*
- Chatarra de municiones o militar.
- Explosivos, residuos explosivos o materiales combustibles.
- Materiales radioactivos de cualquier tipo o contenedores.
- Neumaticos, madera, tierra, desechos de jardin, asfalto, *vidrio, goma*, ladrillo refractario o otros materiales no metalicos.

Los siguientes articulos se aceptaran SOLAMENTE SI SE PREPARAN de las siguientes maneras descritas:

- Los aparatos deben tener CFC's, capacitores, balastos, interruptores de *mercurio, aceites y todo el material* peligroso quitado antes de que sean aceptados. La forma DTSC Form 1430 se requiere para todo los traslados de aparatos preparados. Los aparatos no preparados seran aceptados pero deben separase de otra chatarra y no pueden ser embalados, aplastados o manipulados (por ejemplo: aparatos abandonados).
- Automovil: todos los fluidos, incluyendo el refrigerante, deben ser drenados. Baterias, *contrapesos de plomo de* rueda, bolsas de aire no desplegadas se deben quitar del automovil. Los *tanques de gas deben estar visiblemente* perforados o quitados.
- Baterias de acido de plomo o piezas de bateria, se acceptan pero deben separarse de otra chatarra y no estar partidos o quebrados.
- Contenedores a granel tal como tanques deben ser limpiados segun 22 CCR 66261.7(p) y tener suficientes agujeros abiertos para una visible inspeccion.
- Cilindros de gas incluyendo botellas de aire, amortiguadores, propano y otros tanques de gas *deben ser partidos* por la mitad y las valvulas quitadas. Los cilindros de acetileno se prohiben *estrictamente*.
- Latas de aerosol: *DEBEN ESTAR vacias y aplastadas o* perforadas. Las tapas de plastico se deben quitar.
- Banda de metal: DEBE SER partida en pedazos que *miden 1 pie*.
- Malla ciclonica: DEBE SER partida en pedazos no mas grande de 18 pies X 4 pies.
- Cable y alambre: DEBE SER partido en pedazos de 3 pies, o en espiral y flejado en cuatro lugares con banda de *acero de 3/4 pulgadas de ancho*.
- *No ponga cable, alambre de acero para malla ciclonica*, o chatarra pesada, adentro de los automoviles.

Robo de Metal

- Para disminuir la ocurrencia de robos de metal, Schnitzer *Steel no aceptara* los siguientes materiales a no ser que se indique o establesca claramente quien es el dueno:
- Chatarra de nueva produccion o materiales nuevos que *forman parte* de un proceso de manufactura que se vendan por un individuo, y no por una empresa.
- Articulos usados unicamente por gobiernos, empresas de servicio publico, ferrocarriles o para propositos muy especificos. Esto incluye barandas de proteccion, tapas de registro, ciertos cables usados solamente en lineas *de transmision de alto voltaje, marcadores* historicos y placas de cementerio, y obras de arte.
- Nuevos materiales como los que se usan en las obras de construccion o herramientas que usan los contratistas.
- Materiales que quizas no sean nuevos, siguen siendo sospechosos, como los asientos de un campo atletico o los signos de transito.
- Barriles de cerveza.
- Vehiculos al final de su vida util proveniente de un cliente desconocido, salvo si se presenta el *registro del titulo*. (en algunos locales, vehiculos se reciben unicamente de *desmanteladores* autorizados y transportistas de autos compactados).
- Materiales que hayan sido reportados como robados.

Schnitzer Steel coopera con las autoridades locales de ley para el enjuiciamiento de cualquier acto de robo de metal y tambien mantiene registros de todas las transacciones con nuestra empresa.

SCRAP ACCEPTANCE PRACTICES

Schnitzer

SCHNITZER SOUTHWEST

P.O. Box 747
Oakland, CA 94604
510-444-3919 P
510-444-3370 F

Dear customers:

This brochure clarifies our policies for accepting recyclable metals. These requirements reflect our commitment to responsible environmental management. Please be aware that many of our policies are controlled by state and federal environmental regulation which apply both to us and to our customers. This list is not inclusive; other items not listed may be inappropriate for recycling as scrap metal. Any exception to this policy must be pre-approved.

Please read this brochure carefully, and contact our Commercial Manager Steve Blackman at **(510) 425-6377** if you have questions about specific items.

Remember that any load may be rejected at your cost if these guidelines are not followed.

The following materials will NOT be accepted at our facility:

- Elemental mercury (22 CCR 66260.10).
- Beryllium and magnesium shavings borings, turnings capable of self combustion (22 CCR 66260.10).
- Water reactive metals including sodium, potassium and lithium (22 CCR 66260.10).
- Circuit boards removed from Universal Waste (22 CCR 66260.10).
- Fine metal powders (have a particle size smaller than 100 micrometers) (22 CCR 66260.10).
- Metal contaminated with a hazardous waste (22 CCR 66260.10).
- Metal with any free flowing oils (22 CCR 66260.10).
- Oil filters (22 CCR66260.130).
- Household batteries such as alkaline, nickel cadmium and lithium.
- Asbestos or asbestos containing materials, such as pipe insulation and surfacing material commonly found on I-beams, tanks, and other structural and demolition debris (40CFR 61.150).
- Items that contain or have contained PCBs, including small capacitors, fluorescent light ballasts and electrical transformers or transformer components (TSCA and 40 CFR 258 and 261).
- Oils, gasoline, propane, other petroleum products such as hydraulic fluids, gear oils and grease. Also antifreeze and other free flowing liquid including water.
- Refrigeration or air conditioning units containing CFCs or HCFCs (40 CFR82).
- Automobile airbags, which contain sodium azide (40 CFR 261) or perchlorate.
- Tin cans.
- RVs or Motorhomes.
- Cans, drums or other containers which held hazardous materials or hazardous wastes not meeting "empty container" definition (22 CCR 66261.7).
- Fluorescent lights, neon, high intensity or mercury vapor lights.
- CRT's (cathode-ray tubes) including TVs, monitors, portable DVD players.
- Any material containing hazardous or toxic substances,pesticides, etc.
- Military or munitions scrap.
- Explosives, explosive residues or combustible materials.
- Radioactive materials of any kind or containers.
- Tires, wood, dirt, yard debris, concrete asphalt, glass, rubber, fire brick or other nonmetallic materials.

The following items will be accepted only if prepared as described:

- Appliances must have CFC's, capacitors, ballasts, mercury switches, oils and all other hazardous materials removed prior to acceptance. A DTSC Form 1430 is required for all shipments of prepared appliances. Unprepared appliances will be accepted but must be separated from other scrap metal and must not be baled, crushed or tampered with (i.e. orphan appliances).
- Automobile: ALL fluids, including refrigerant must be drained. Batteries, lead wheel weight, mercury switches and undeployed air bags must be removed. Gas tanks must be visibly punctured or removed.
- Lead-acid batteries or battery parts, can be accepted but must be separated from other scrap and not cracked or broken.
- Bulk containers such as tanks must be cleaned as per 22 CCR 66261.7 (p) and have sufficient holes open for visible inspection.
- Gas cylinders including air bottles, shock absorbers, propane and other gas tanks must be cut in half and valves removed. Acetylene cylinders are strictly prohibited.
- Aerosol cans: MUST be empty and crushed or punctured. Plastic caps must be removed.
- Metal banding: MUST be cut in 1-foot lengths.
- Chain link fencing: MUST be cut in sections no larger than 18 feet by 4 feet.
- Cable and wire: MUST be cut in 3-foot lengths, or coiled and banded with 34-inch steel banding in at least four places.
- Do not put cable, cyclone fencing, wire rope or heavy melt metal inside automobiles.

Metal Theft

- In an effort to curtail the rising incidence of metal theft, Schnitzer Steel's operations refuse to accept the following material unless ownership is clearly established:
- New production scrap or new materials that are part of a manufacturing process that are being sold by an individual, not a company.
- Items used only by government, utilities, railroads or very specific purpose. This includes guardrails, manhole covers, certain cables used only in high voltage transmission lines, historic markers and cemetery plaques, and art work.
- Full sized, new materials such as those used in construction or equipment tools used by contractors.
- Materials that may not be new but are clearly suspect such as bleachers from an athletic field or traffic signs.
- Beer kegs.
- End-of-life vehicles from an unknown customer unless a written record of title is presented. (In some locations, end-of-life vehicles are accepted only from licensed dismantlers and bulk haulers.).
- Materials that have been reported stolen.

Schnitzer Steel's operations maintain records of all transactions and cooperates fully with local law enforcement in the prosecution of metal theft.

Management Practices

to

Reduce Fugitive Emissions

MANAGEMENT PRACTICES TO REDUCE FUGITIVE EMISSIONS - ROADWAYS AND OTHER TRAFFICKED SURFACES

List and describe facility's management practices to reduce fugitive emissions from roadways and other trafficked surfaces. Detail the schedule of activities conducted.

	Section #	Management Practices to Reduce Fugitive Emissions	Schedule of Activity
ROADWAY AND OTHER TRAFFICKED SURFACES	1	Industrial wheel wash at front gate	Whenever materials haul trucks exit the plant
	2	Wheel wash at concrete dock	Whenever material haul trucks travel out onto the shiploading pier.
	3	Sweeping of internal paved roads.	8 hours per day, Monday through Friday (Sweeping is split between internal roads and Embarcadero West)
	4	External paved road (Embarcadero West) swept during normal business hours.	8 hours per day, Monday through Friday (Sweeping is split between internal roads and Embarcadero West)
	5	Watering of internal roads, scrap metal stockpiles and treated shredder residue stockpiles using water truck and [Dust] Boss misting cannons.	A minimum of several times per day, more frequently if needed.
	6	Water spraying of scrap product during unloading of transport trucks into 3-sided hoppers on dock for shipping.	Limited to few seconds of truck discharge into hopper to minimize water runoff.
	7	Visual inspection of all onsite roads to assure sweeping is taking place	At least one inspection daily
	8	Employee training	Initially for new employees, and annual update for current employees. New employee training includes an air quality component among other pertinent environmental topics. Annual training is a full tailgate session specifically tailored to the Oakland Schnitzer facility. All emission minimization topics are reviewed in this session. Frequency of training is: 1) New Employee: within 90 days of hire. 2)Tailgate Training: once per year for all employees and supervisors.
	9	Speed limit of 5mph for equipment and trucks inside yard.	24 hours per day, 7 days per week whenever facility equipment is operating.

MANAGEMENT PRACTICES TO REDUCE FUGITIVE EMISSIONS – METAL MANAGEMENT

List and describe facility's management practices to reduce fugitive emissions. Include the practices for receiving, processing and handling scrap and shredded materials to prevent fugitive emissions from operations. Detail the schedule of activities conducted.

	Section #	Management Practices to Reduce Fugitive Emissions	Schedule of Activity
TRANSPORT	1	Speed limit of 5 mph. Signs posted.	24 hours per day, 7 days per week whenever equipment is operating.
RECEIPT	2	Visual inspection of incoming truck loads to intercept and refuse loads containing excessive soil. Thorough physical and visual inspections of random selected incoming loads. Annual training of main gate inspectors, including decision of where incoming material will be unloaded.	During all hours of operation when receiving incoming trucks.
COLLECTION	3	Covered by other categories above and below	
SORTING	4	Main gate inspectors trained to direct incoming trucks to deposit loads at appropriate storage piles.	During all hours of operation when receiving incoming trucks.
SEGREGATION	5	Materials entering facility are segregated into different storage piles before further processing, including Shredder Input Pile, HMS Product Storage Piles 1 and 2, Bonus Storage Pile, Material to be Sheared Storage Pile, and Non-Ferrous Storage piles.	During all hours of operation when receiving incoming trucks
SEPARATION	6	Materials being separated after shredding are wetted by initial shredding process. This residual moisture content helps to reduce fugitive dust emissions from separation processes.	During all hours of operation when receiving incoming trucks
COMPILATION	7	Covered by other categories above and below	
CRUSHING	8	No crushing is conducted at this facility.	
SHREDDING	9	Redundant control devices used to reduce all particulate emissions, including water spraying, cyclone separation and collection, dry filtration, and mist elimination.	Shredding: 3:00 am to 11:45 am, Monday through Friday (Can vary)
STORAGE OF METALS	SEE STORAGE PILE MANAGEMENT SECTION		
STORAGE OF METAL-CONTAINING MATERIAL	SEE STORAGE PILE MANAGEMENT SECTION		
STORAGE OF NON-METALLIC MATERIAL	SEE STORAGE PILE MANAGEMENT SECTION		

MANAGEMENT PRACTICES TO REDUCE FUGITIVE EMISSIONS – SHREDDER RESIDUE MANAGEMENT

List and describe facility's management practices to reduce fugitive emissions from processing and handling shredder residue. Detail the schedule of activities conducted.

	Section #	Management Practices to Reduce Fugitive Emissions	Schedule of Activity
SHREDDER RESIDUE MANAGEMENT	1	Employee training.	Initially for new employees, and annual update for current employees. New employee training includes an air quality component among other pertinent environmental topics. Annual training is a full tailgate topic specifically tailored to the Oakland Schnitzer facility. All emission minimization topics are reviewed in this session.
	2	Initial shredding process adds water to feedstock. Residual moisture in Non Ferrous fraction of shred output helps to minimize fugitive dust emissions.	Whenever facility shredder is operating, water is being added to the material being processed.
	3	Covered conveyors in Joint Product Plant to better contain material and separation process.	Conveyors are covered when Joint Product Plant is operating. Conveyor covers occasionally removed for maintenance.
	4	Oscillating, elevated Dust Boss to mist Joint Product Plant, thereby minimizing fugitive emissions from separation process.	Whenever Joint Product Plant is operating with the exception of rainy days.
	5	Misters at key transition points in Joint Product Plant to minimize fugitive emissions.	Whenever Joint Product Plant is operating.
	6	Loading equipment operators will be trained to limit the fall of material when loading trailers by loading as close as feasible to the top of trailer.	Whenver material is being handled by mobile equipment.
	7	Once shredder residue trucks are loaded, they are tarped prior to leaving the facility, further minimizing fugitive emissions.	Whenever treated auto shredder residue is being transported offsite.

MANAGEMENT PRACTICES TO REDUCE FUGITIVE EMISSIONS – DEPOLLUTION ACTIVITIES

List and describe facility's management practices to reduce fugitive emissions from processing and handling materials during depollution activities. Detail the schedule of activities conducted.

	Section #	Management Practices to Reduce Fugitive Emissions	Schedule of Activity
DEPOLLUTION ACTIVITIES	1	Subcontracted depollution only conducted by certified subcontractors holding DTSC and EPA permits (i.e. "Certified Appliance Recyclers").	Occasional activity when applicances are accepted for onsite depollution. CAR contractors are onsite for all appliance depollution activities. Schnitzer Steel is authorized by DTSC to depollute appliances.

METAL MANAGEMENT – STORAGE PILE MANAGEMENT

List and describe the facility's storage pile management practices to reduce fugitive emissions from stored materials. Detail the schedule of activities conducted.

Types of Storage	Section #	Management Practices to Reduce Emissions	Schedule of Activity
Storage of Delivered Scrap	1	Water spraying of all delivered scrap stockpiles as needed during unloading and material handling. Can include water truck and/or use of Dust Boss misting turbines.	During all hours of operation when receiving incoming trucks as needed.
	2	Pile size of Light Tin/Iron (Shredder Infeed Material) is kept to a minimum by shredding the maximum amount possible every day. Pile sizes of unprepared HMS material is kept to a minimum by processing material through the fixed shear in a timely manner.	Material is stored onsite 7 days per week.
	3	Light Tin/Iron piles (Shredder Infeed Material) is monitored by the nighttime security guards every two hours during non-business hours with an infrared camera to check for hot spots that are warmer than ambient temperature.	During off business hours - nights and weekends
Storage of Unprocessed Material	4	Water spraying of all unprocessed material storage piles as needed during unloading and material handling. Can include water truck and/or use of Dust Boss misting turbines.	During all hours of operation as needed.
	5	Pile size of Light Tin/Iron (Shredder Infeed Material) is kept to a minimum by shredding the maximum amount possible every day. Pile sizes of unprepared HMS material is kept to a minimum by processing material through the fixed shear in a timely manner.	Material is stored onsite 7 days per week.
	6	Light Tin/Iron piles (Shredder Infeed Material) is monitored by the nighttime security guards every two hours during non-business hours with an infrared camera to check for hot spots that are warmer than ambient temperature. HMS and Bonus material stockpiles are predominantly metallic (greater than 99.99%) and lack sufficient combustible material to sustain a fire. As such, they are not monitored with the infrared camera.	During off business hours - nights and weekends.
Storage of In-process Material	7	Water spraying of all in-process material storage storage piles as needed during unloading and material handling. Can include water truck and/or use of Dust Boss misting turbines.	During all hours of operation as needed.
	8	Non-Ferrous Aggregate stockpiles are kept to a minimum by processing the material in a timely manner through the Joint Product Plant.	Material is stored onsite 7 days per week.
	9	Non-Ferrous Aggregate is monitored by the nighttime security guards every two hours during non-business hours with an infrared camera to check for hotspots that are warmer than ambient temperature. Its high residual moisture content from the shredding process makes fires unlikely in this material.	During off business hours - nights and weekends
Storage of Finished Product	10	Water spraying of all finished product stockpiles as needed during unloading and material handling. Can include one or more of the following: water truck, Dust Boss misting turbines, hand spraying with hose and nozzle.	During all hours of operation as needed.
	11	Stockpiles of finished product such as shred, prepared HMS, prepared Bonus, Zorba, and other non-ferrous commodities are shipped out according to schedules of material sales and their sizes can vary and are more difficult to control/minimize.	Material is stored onsite 7 days per week.

	12	Finished product is predominantly metallic (greater than 99.99%) and lacks sufficient combustible material to sustain a fire. As such, they are not monitored with the infrared camera.	
Storage of Shredder Residue	SEE SHREDDER RESIDUE MANAGEMENT SECTION		

METAL MANAGEMENT

Describe facility's storage pile management practices to minimize and prevent emissions from stored materials (i.e. limiting size of piles, creating fire breaks, segregation of materials, etc.). Specifically include policies and measures to prevent and control combustion of storage pile materials.

- Full time visual observation of shredder input pile for potentially flammable off-spec[ification] materials (e.g. Li-Ion battery, gasoline residue).

- Security Guards perform visual observations of stockpiles every two hours after business hours. If smoldering or fire is observed, the fire department and yard management are notified.

- A program to monitor stockpile temperature fluctuations (Shredder Feedstock and Shredder Residue) is already in place as noted in the current EMP. Night security guards monitor the pile temperatures with an infrared camera. A log or record of temperature monitoring activities will be created and implemented. Perimeter pile monitoring with infrared cameras is a standard industry practice used by other shredders in California and througout the United States for detecting potential hot spots that may result in a fire. Radiant heat from hot spots in the center of the pile will cause a rise in temperature on the surface of pile which is expressed as an anomaly in relation to ambient temperatures. Large temperature differentials will result in operations staff being contacted to investigate potential causes.•

While it is Schnitzer's goal to shred as much scrap as possible on any given day and preferably to the ground, the following factors prevent us from always achieving this goal: 1) Variable PG&E power usage curtailment schedule which can restrict the time of day we can operate the shredder, 2) We do not shred every day of the week due to maintenance, staffing considerations, and variable incoming volume 3) Scrap is received throughout the day, even after shredding operations have ended for the day, 4) the inflow volume in a given day can exceed our ability to shred all material in a standard shift. Further, shredder feedstock stockpiles are not significant sources of fugitive emissions. Implementation of this recommended BMP would unfairly and unnecessarily restrict facility operations.

- Schnitzer Steel has coordinated with the Oakland Fire Department to stock fire suppression foam additive onsite in an easily accessible location in case of a fire. This material can be hooked up to fire truck pump systems to mix the foam additive into the water helping to better suppress the fire

- Schnitzer maintains records of all environmental training related to this EMP for employees at the facility.

- Schnitzer maintains periodic random load inspection records (looking for prohibited material) at the facility.

Description of Onsite Management

And

Schedule of Facility Operations

Onsite Management Practices

Provide a description of the facility's onsite management practices to reduce fugitive emissions.

All new employees receive initial environmental compliance training which includes an air quality, fugitive emission control component. This training is conducted either by yard management or Regional Environmental Manager. All shifts are covered by this training (i.e., night and day shift employees). The topics include: Engine idling limits, use of water for dust control.

Facility Specific tailgate training session on air quality issues annually that includes fugitive emissions and site BMPs. This training is conducted by site management and supervisors. All shifts are covered by this training (i.e. night and day shift employees). The topics include engine idling limits, use of water truck for dust control, use of Dust Boss machines for dust control, sweeping for dust control, the difference between point source emissions and non-point source emissions, speed limit of equipment and vehicles to reduce dust, and reporting potential issues like heavy dust generation.

Facility specific PowerPoint training on air quality regulations, including fugitive dust control and site BMPs for managers and supervisors annually. This training is conducted by the Regional Environmental Manager. The topics include engine idling limits, use of water truck for dust control, use of Dust Boss machines for dust control, sweeping for dust control, the difference between point source emissions and non-point source emissions, speed limit of equipment and vehicles to reduce dust, reporting potential issues like heavy dust generation, and CARB heavy-duty vehicle emission control programs such as the cargo handling rule and the drayage truck rule.

Description of Onsite Management

Identify if staff are designated to observe visible emissions from metal shredding and recycling operations during business hours and after the close of business. Specify if staffing is Visible Emissions Evaluation (VEE) Certified. If onsite staffing is designated after the close of business, include a description of the duties to ensure visible emissions are minimized from storage piles of material.

Section #	Operations	Onsite Personnel DURING Business Hours to Observe Visible Emissions	Staffing to Observe Visible Emissions	Onsite Personnel AFTER Business Hours to Observe Visible Emissions	Staffing to Observe Visible Emissions	If onsite staffing is designated after the close of business to observe visible emissions, describe the specific duties to manage storage piles to prevent and minimize visible emissions.
1	**Roadways and Other Trafficked Surfaces**	☒ Yes ☐ No	Number of Staff = 5 Visible Emissions Certified ☐ Yes, # ☒ No	☒ Yes ☐ No	Number of Staff = 2 Visible Emissions Certified ☐ Yes, # ☒ No	Night Security Staff (two persons) has the major responsibility to observe any visible emissions. This staff is required to conduct observation walks every two hours to the Shredder Infeed Storage Pile, Non-Ferrous Raw Storge Pile, and Treated Shredder Residue pile to also look for potential fires. These piles are observed with an infrared camera to check for "hot spots" that could indicate potential fires. Section 10: No crushing of vehicles takes place at this facility. Section 16: Schnitzer Steel does not accept intact appliances, only depolluted appliances. Therefore, no depollution activities typically take place. Schnitzer employees will enroll in CARB VEE training prior to the end of 2016.
2	**Metal Management**	☒ Yes ☐ No		☒ Yes ☐ No		
3	Transport	☒ Yes ☐ No		☒ Yes ☐ No		
4	Receipt	☒ Yes ☐ No		☒ Yes ☐ No		
5	Collection	☒ Yes ☐ No		☒ Yes ☐ No		
6	Sorting	☒ Yes ☐ No		☒ Yes ☐ No		
7	Segregation	☒ Yes ☐ No		☒ Yes ☐ No		
8	Separation	☒ Yes ☐ No		☒ Yes ☐ No		
9	Compilation	☒ Yes ☐ No		☐ Yes ☐ No		
10	Crushing	☐ Yes ☒ No		☐ Yes ☒ No		
11	Shredding	☒ Yes ☐ No		☒ Yes ☐ No		
12	Storage of Metals	☒ Yes ☐ No		☒ Yes ☐ No		
13	Storage of Metal-Containing Material	☒ Yes ☐ No		☒ Yes ☐ No		
14	Storage of Non-Metallic Material	☒ Yes ☐ No		☒ Yes ☐ No		
15	**Shredder Residue Management**	☒ Yes ☐ No		☒ Yes ☐ No		
16	**Depollution Activities**	☐ Yes ☒ No		☐ Yes ☒ No		

Description of Onsite Management

Identify any employee training provided pertaining to management practices and work practice standards to minimize fugitive emissions from recycling and shredding operations.

Section #	Employee Training
1	Initial environmental training for new employees covers a variety of environmental topics including air quality related training. This training takes place within 90 days of hire.
2	Annual Air Quality Training for managers and supervisors is conducted once every 12 months. Topics include general particulate and dust control and shredder emissions/BAAQMD Permit.
3	Annual Air Quality Training for all yard employees (i.e. non-office employees) is conducted once every 12 months. Topics include general particulate and dust control and shredder emissions/BAAQMD Permit.
4	Schnitzer employees will enroll in CARB VEE training prior to the end of 2016.

Schedule of Facility Operations

Provide the facility's schedule and hours of operation. Schedule of operations should include all shifts with specific operations identified.

Material Receiving: Monday through Friday 4:00 am to 3:30 pm

Shiploading: As needed 7 days per week, Shift 1: 6:00 am to 4:30 pm, Shift 2: 4:30 pm to 3:00 am.

Metal Processing: Shredding: 3:00 am to 11:45 am, Monday through Friday

Metal Processing: Shearing: 4:00 am to 12:30 pm, Monday through Friday

Metal Processing: Torch Cutting: 4:00 am to 12:30 pm, Monday through Friday

Material Processing: Joint Product Plant: Shift 1: 6:00 am to 4:30 pm, Shift2: 4:30 pm to 3:00 am. Both shifts Monday through Friday

ALL OPERATIONS CAN VARY INCLUDING DAYS OF WEEK, SHIFT HOURS, ETC AS NEEDED TO SUPPORT OPERATIONAL NEEDS, VOLUME OF METAL RECEIVED, PG&E POWER CURTAILMENT NEEDS, ETC.

Technical Data

6-4-403.1

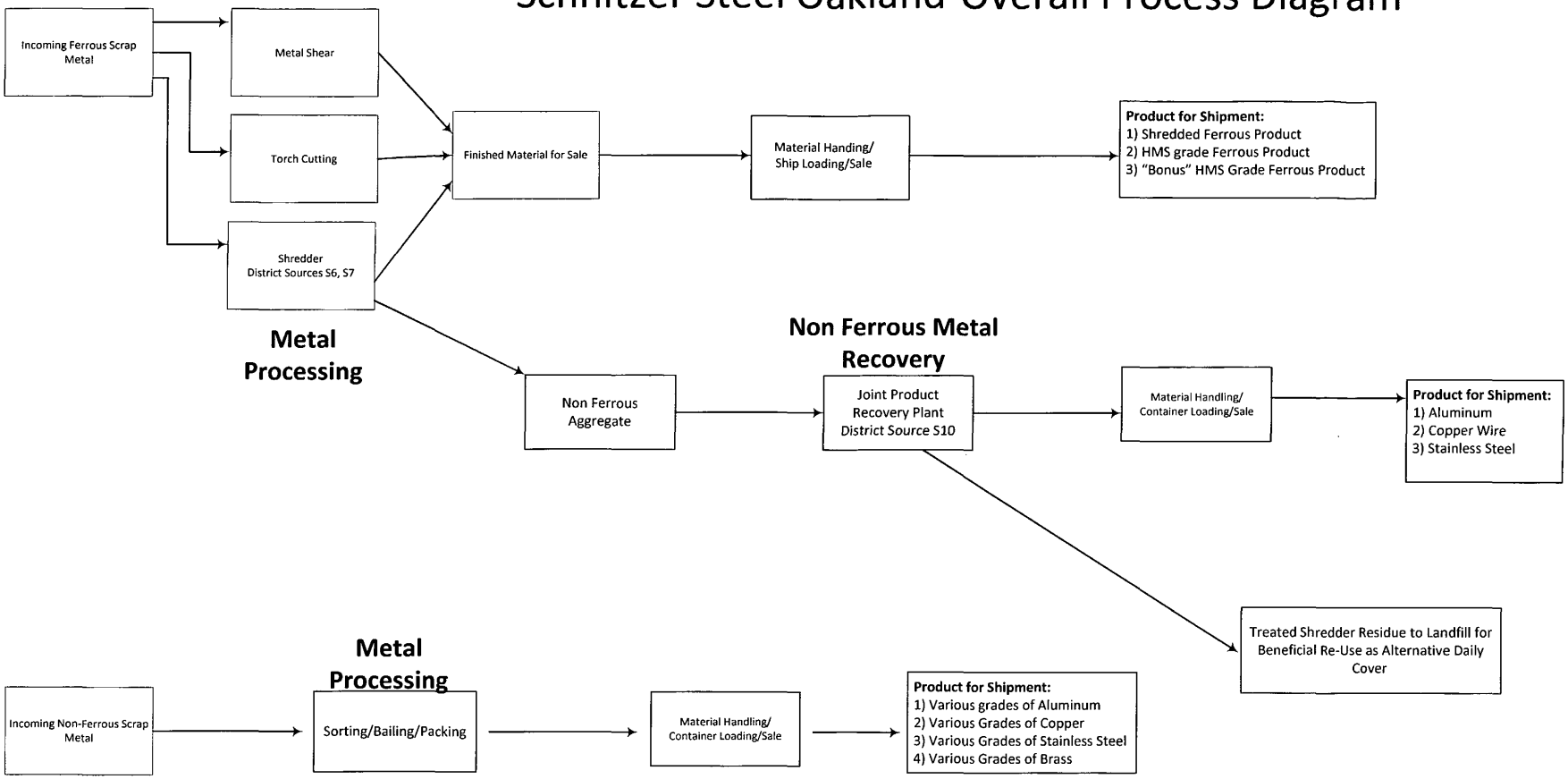
A. *Process Flow Diagram* - Facilities must indicate all operations in Section 6-4-402, the flow of materials used and identify all monitoring and the processes, abatement and controls to minimize emissions beginning from material receipt to achievement of final product. Identify all equipment by source numbers according to District Permit or as exempt from District Permit. Include the abatement and control devices.

B. *Facility Layout / Floor Plan* - Facilities must indicate all relative locations of processing equipment and monitoring and controls, all permitted and exempt sources identified in the process flow diagram per Section 6-4-403.1.1 and any other source(s) that may contribute to particulates. Include all building walls, partitions, doors, windows, vents and openings and indicate all areas that have abatement for particulates. Note roadways and other trafficked surfaces, and indicate the types and locations of pervious and impervious surfaces. Identify all metal recycling and shredding equipment by the facility's District Permit source number or as exempt from District permit requirements and include abatement and control devices.

A. Process Flow Diagram

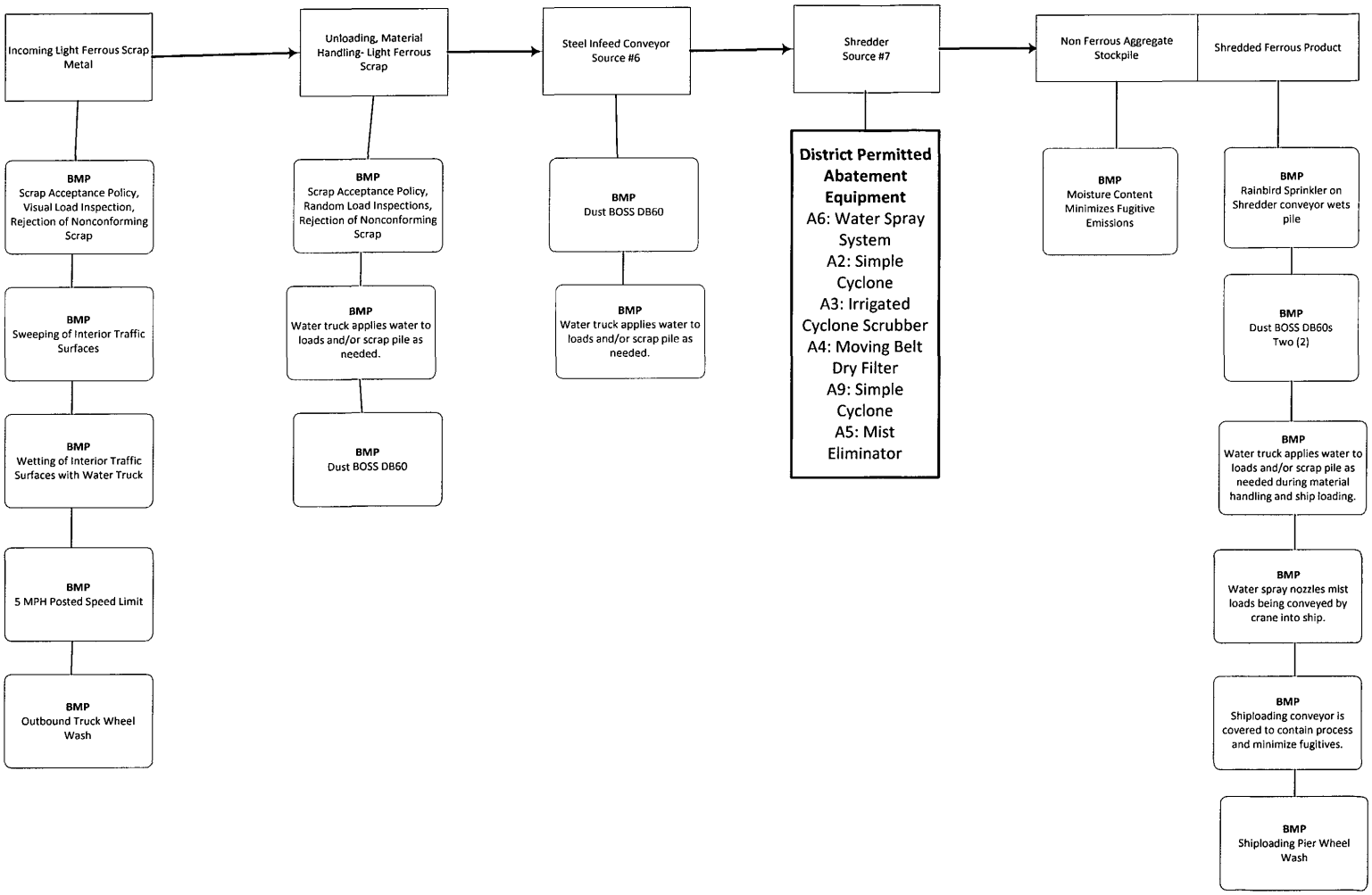
Attach Process Flow Diagram

Schnitzer Steel Oakland-Overall Process Diagram

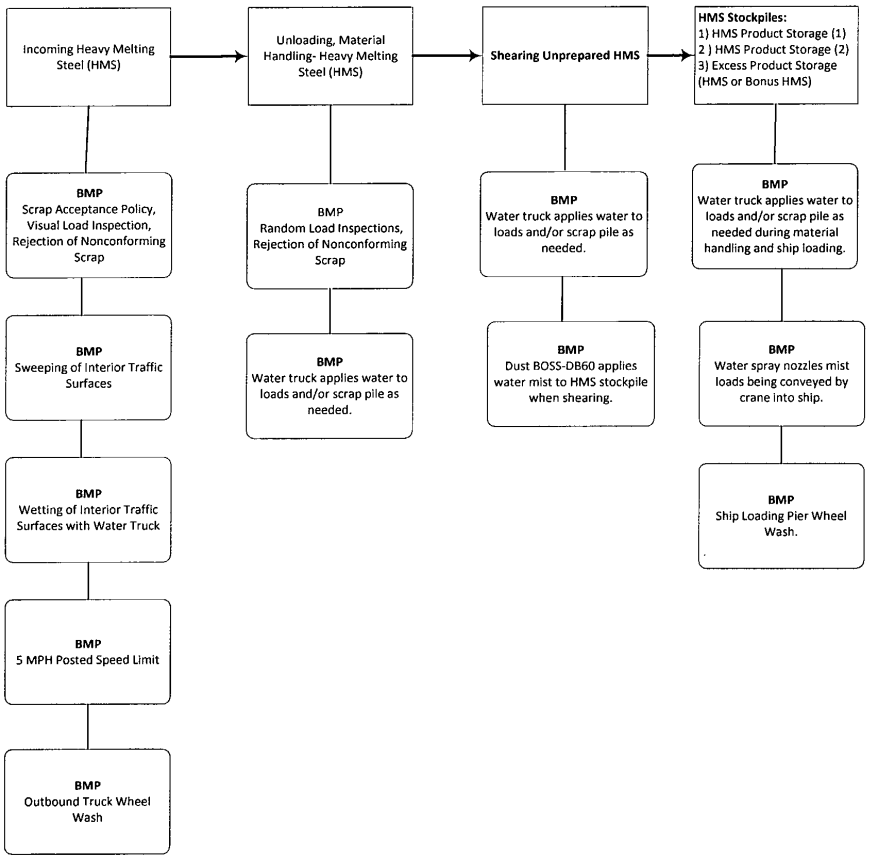


Oakland Schnitzer Steel Process Flow Diagram

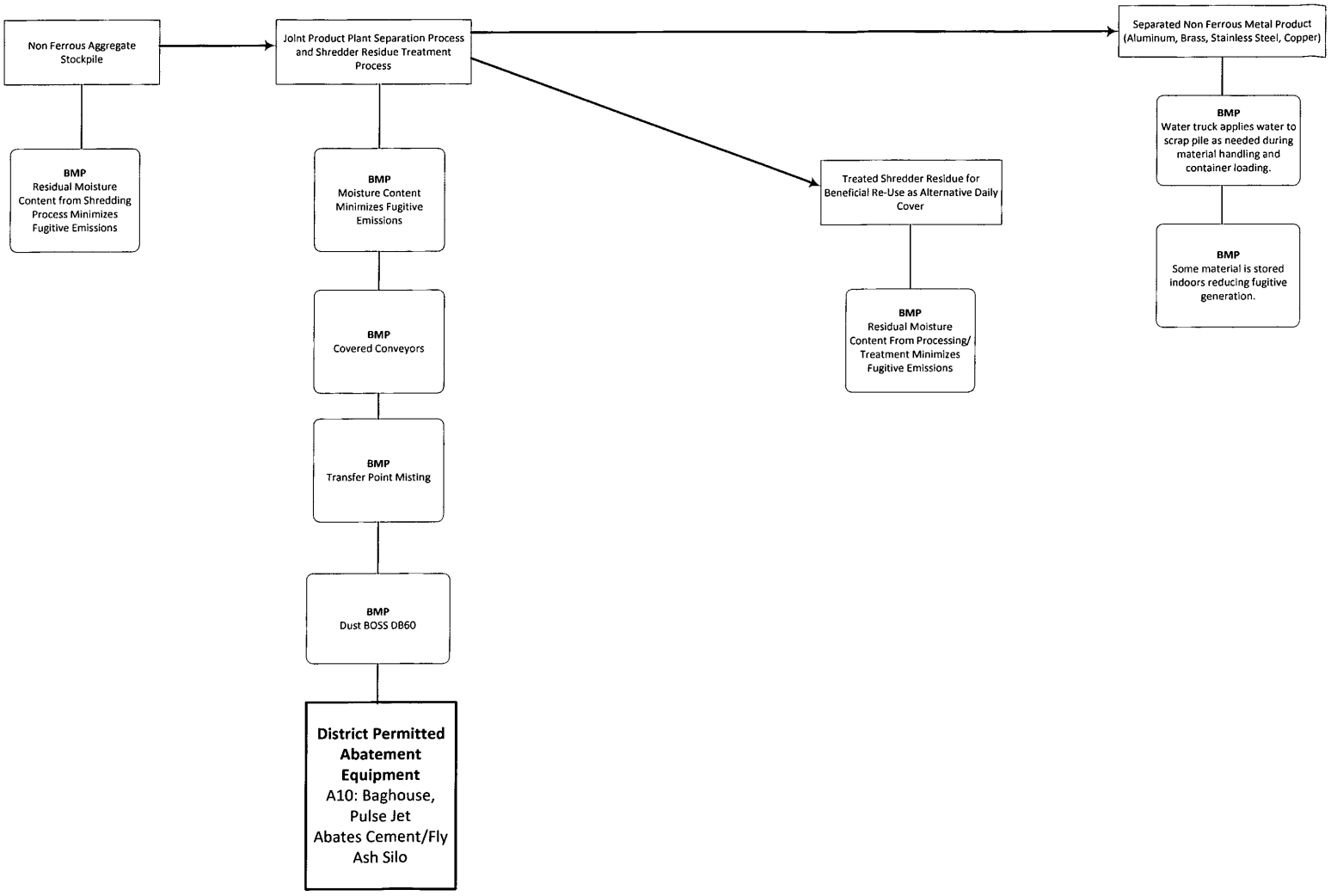
Shredding Process Diagram With BMP's



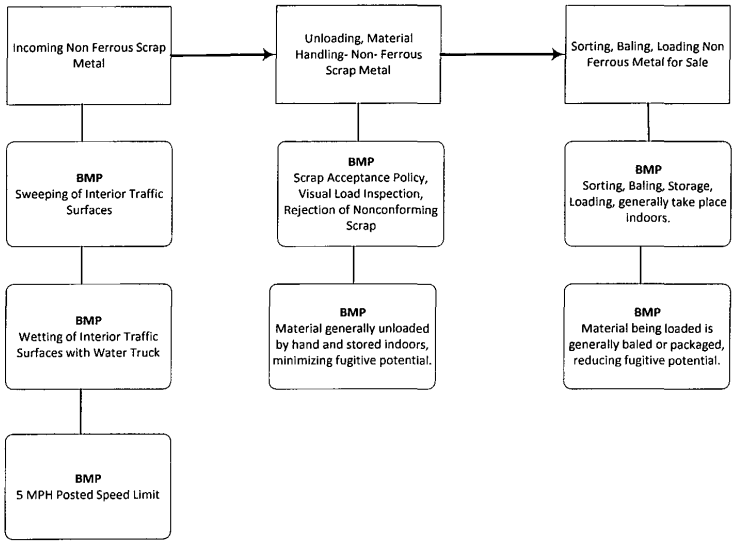
Shearing Process Diagram with BMP's



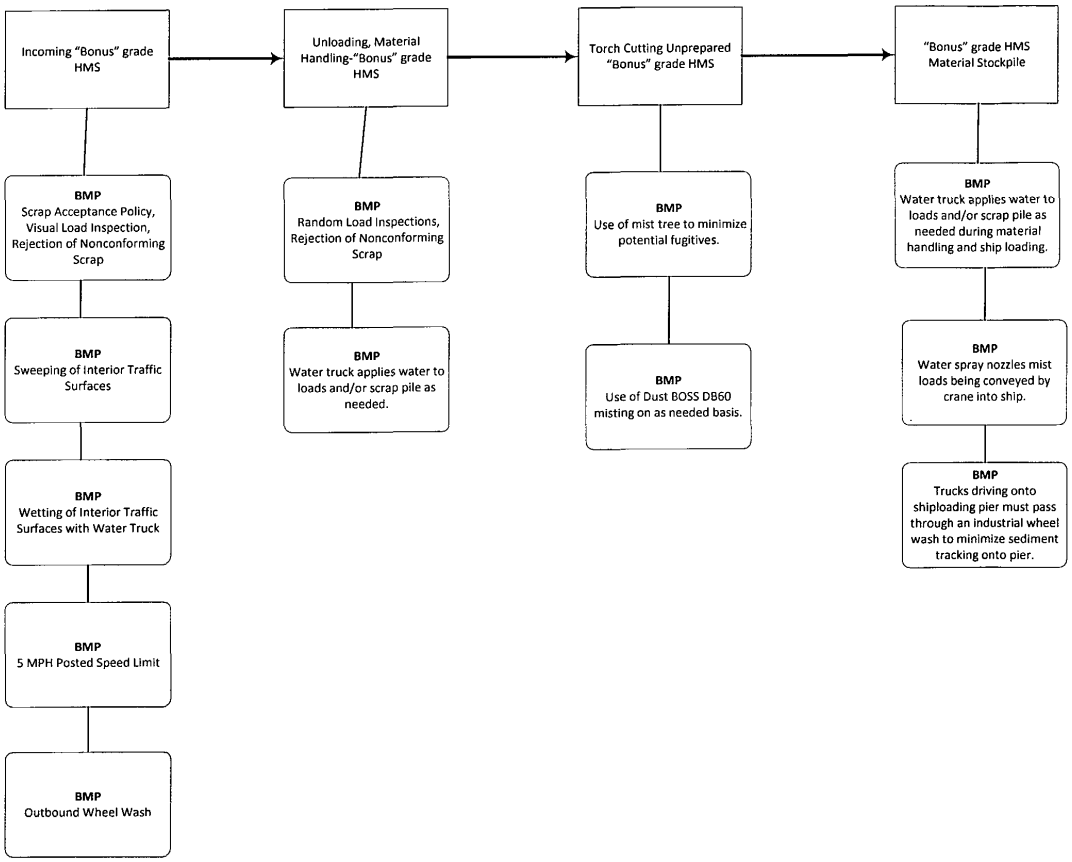
Joint Product Plant Separation Process Diagram with BMP's



Non Ferrous Metal Receiving & Processing Diagram with BMP's



Torch Cutting Process with BMP's

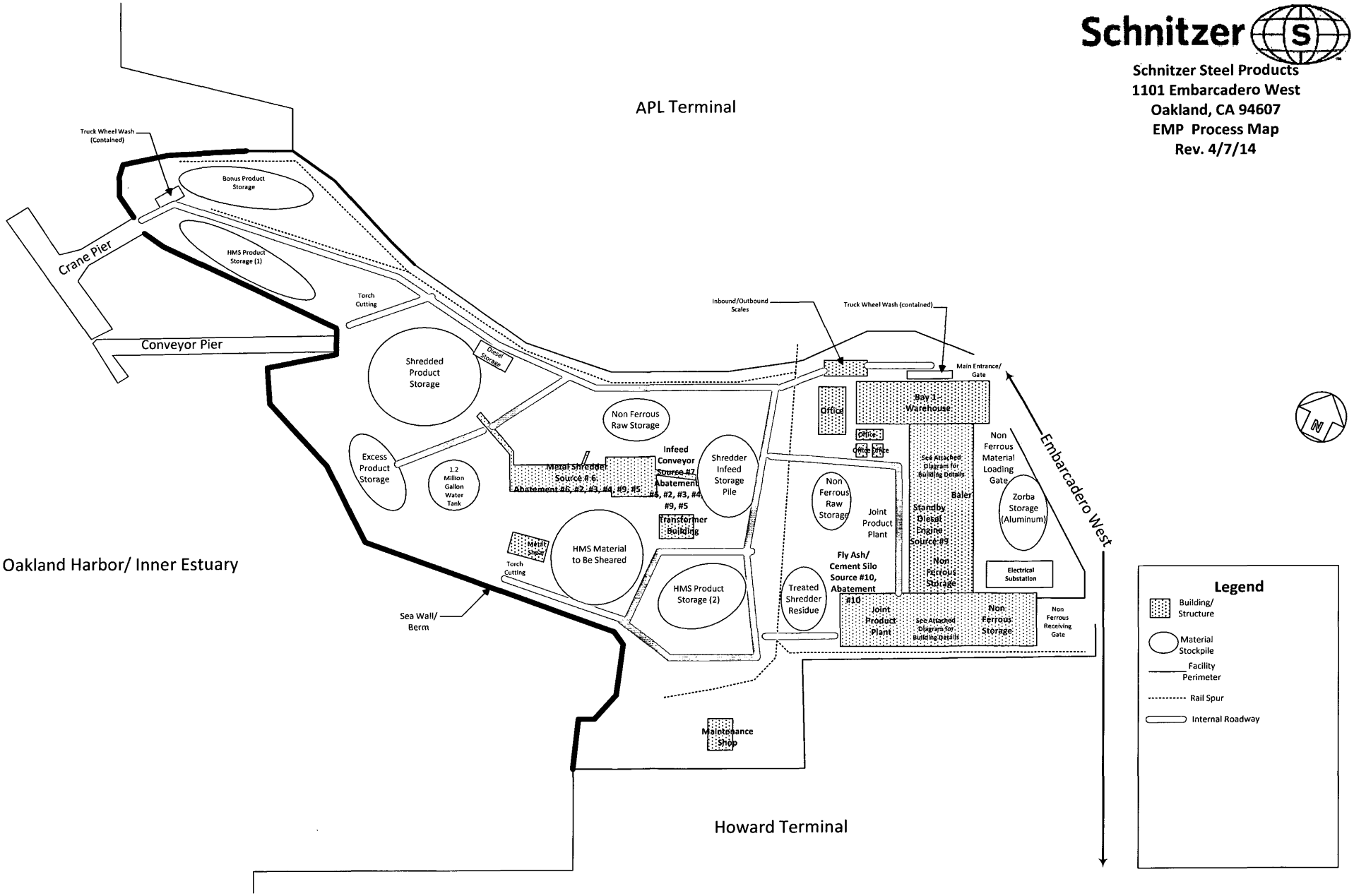


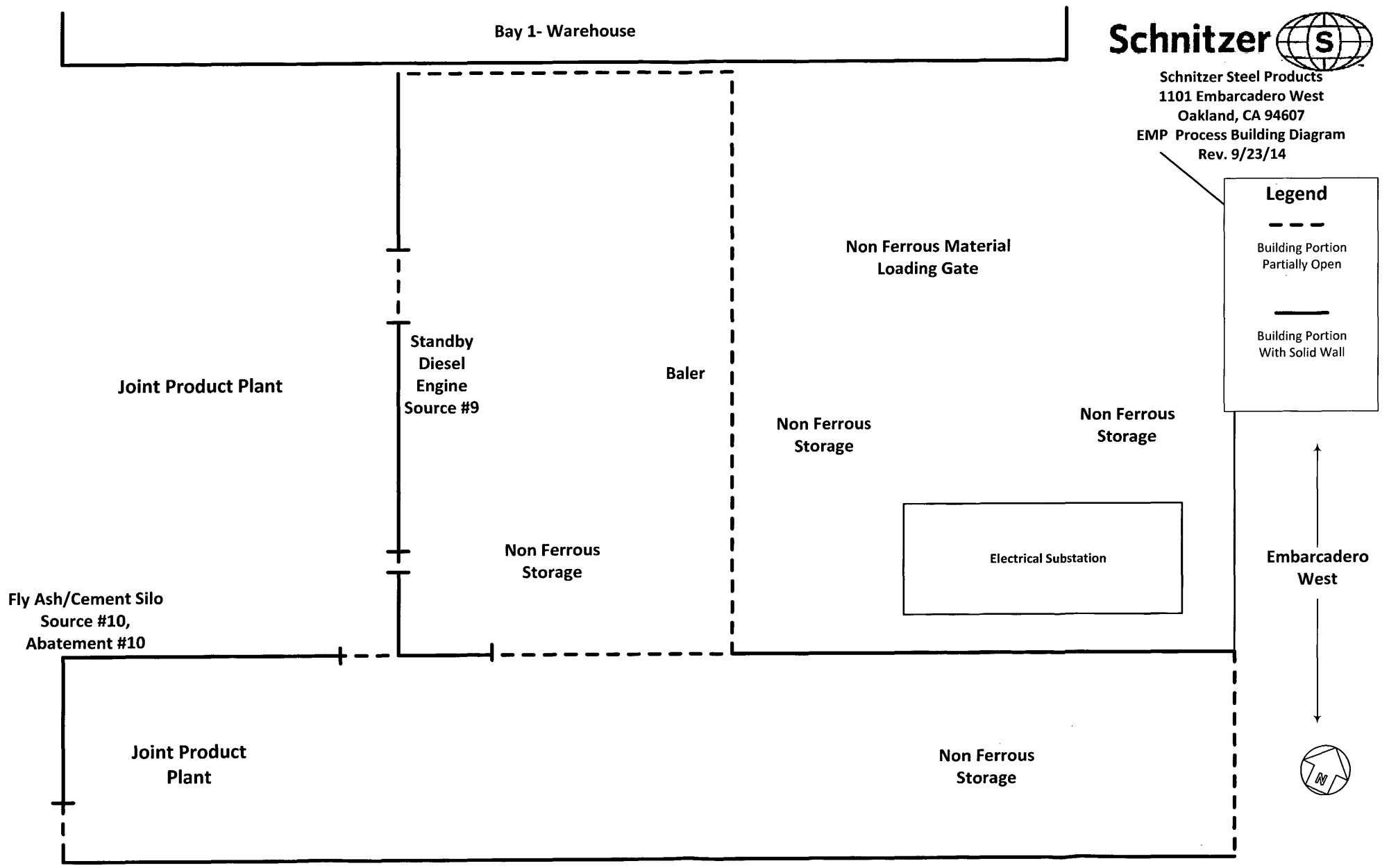
B. Facility Layout / Floor Plan

Attach Facility Layout/ Floor Plan

Schnitzer

Schnitzer Steel Products
1101 Embarcadero West
Oakland, CA 94607
EMP Process Map
Rev. 4/7/14




Bay 1- Warehouse
Schnitzer
Schnitzer Steel Products
1101 Embarcadero West
Oakland, CA 94607
EMP Process Building Diagram
Rev. 9/23/14
Legend
Building Portion Partially Open
Building Portion With Solid Wall
Non Ferrous Material Loading Gate
Standby Diesel Engine Source #9
Joint Product Plant
Baler
Non Ferrous Storage
Non Ferrous Storage
Electrical Substation
Embarcadero West
Non Ferrous Storage
Fly Ash/Cement Silo Source #10, Abatement #10
Joint Product Plant
Non Ferrous Storage
N

Fugitive Emissions Reductions Previously Realized

6-4-403.2

Facilities must provide a description of the equipment, processes and procedures installed or implemented within the last five years that primarily or secondarily reduce fugitive emissions from facility operations. Include the purpose for implementation and detail any employee training that was conducted for that equipment, process or procedure and the frequency of the training.

6-4-403.2 FUGITIVE EMISSIONS REDUCTIONS PREVIOUSLY REALIZED

Section #	Identify Type of Operation per Section 6-4-402	Description of Equipment, Processes or Procedures Previously Realized	Implementation Date	Purpose of Implementation	Employee Training Conducted	Description of Employee Training and Frequency of Training
1	Roadways and other Trafficked Surfaces	Commercial wheel wash at facility exit	10/30/2012	Minimize trackout of dust on to city streets	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
2	Roadways and other Trafficked Surfaces	Complete power wash cleaning of dock and pier annually. Wheel washer was installed at pier crane dock.	9/2012,9/2013 and 1/2013, respectively	Reduce silt on dock and pier surface that can be entrained as fugitive particulate emission.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
3	Roadways and other Trafficked Surfaces	Facility Speed Limit, 5 mph.	2009 (estimated)	Reduce generation of fugitive dust through controlling vehicle and equipment speed.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
4	Metal Management	Three Dust Boss Mist Turbines purchased to cover the shred pile, ship loading conveyor, and metal shearing operations.	2011	Wet piles during material handling and minimize particulates already mobilized in the air.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
5	Metal Management	Water truck used to wet piles when material handled.	10/2007	Minimizes particulate generation during material handling.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
6	Metal Management	Ship loading conveyor covered/contained.	10/2013	Reduce potential for windblown fugitives while shiploading.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
7	Metal Management	Purchased/Installed Remote Control, Dust Boss (Model DB60) on tower at Shred Pile/Shred Shiploading Conveyor.	10/2013	Replaces mobile Dust Boss with a fixed, elevated Dust Boss that can be operated by remote control. Elevated platform allows for better coverage of shred stockpile. Additionally, this unit can oscillate 359 degrees, giving a greater range of coverage.	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
8	Shredder Residue Management	Material is kept moist with water.	1980	Minimize mobilization of particulate matter	☒ Yes ☐ No	Initial and annual update training in tailgate sessions.
					☐ Yes ☐ No	

Schedule for the Implementation of the EMP Elements

6-4-403.4

A. Provide a list of existing or current EMP elements in place pursuant to and under a District Authority to Construct as of the initial date of EMP submittal (on or before May 1, 2014). Include a description, the purpose and schedule of the element(s).

B. Provide a list of new or future EMP elements to be implemented following APCO approval of the EMP. Include a description, the purpose and schedule of the element(s) to be implemented.

A. 6-4-403.3.1 SCHEDULE FOR THE IMPLEMENTATION OF THE EMP ELEMENTS (on or before May 1, 2014)

Section #	Identify Type of Operation per Section 6-4-402	List Specific Elements to be Implemented on or before May 1, 2014	Implementation Date	Description of Elements to be Implemented	Purpose of Implementation
1	Metals Management	Dust Boss DB60 installed at Shredder Infeed Material Stockpile.	3/2014	Water mist turbine	Wetting of Shredder Feed Stock Pile and unloading area. General suppression of incidental fugitive dust.
2	Metals Management	Dust Boss DB60 installed on Tower at Joint Product Plant.	4/2014	Tower mounted water mist turbine	Wetting of outdoor portion of Joint Product Plant. General suppression of incidental fugitive dust.
3	Metals Management; and Shredder Residue Management	Infrared Camera	4/2014	After hour infrared camera inspection of Shredder Infeed Stockpile, Shredder Residue Stockpile, Non-Ferrous Raw stockpile.	Security Guards to supplement visual observations for fire potential with infrared camera. This will help to identify issues in stockpiles before they progress to a potential fire.
4	Metals Management	Foam Injection System	4/2014	The Foam Injection System pumps foam additive into the cooling water injection system of the shredder at a rate controlled by the shredder's programmable logic controller (PLC).	Reduce generation of fugitive dust during shredding.

B. 6-4-403.3.2 NEW OR FUTURE EMP ELEMENTS TO BE IMPLEMENTED

Section #	Identify Type of Operation per Section 6-4-402	List Specific Elements to be Implemented Following APCO Approval of the EMP	Implementation Date	Description of Elements to be Implemented	Purpose of Implementation
1	Roadways and other trafficked surfaces	Increase amount of paved surfaces throughout yard.	2018	Schnitzer is committed to increasing the amount of paved surfaces over the next 5 years. Areas of new paving will take place in the following order of priority: 1) Truck traffic lanes that are not already paved, 2) Internal equipment traffic routes that are not already paved, 3) Material stockpile areas that are not already paved.	Reduce fugitive dust generation. Paved surfaces allow for easy sweeping of particulates. Less mud created and tracked throughout yard.
2	Metals Management	Dust Boss DB60	2016	Install Dust Boss DB60 at HMS and Bonus Stockpiles	Wet HMS and Bonus stockpiles, general suppression of incidental fugitive dust.
3	Shredder and Joint Product Plants	Enclosure and Emission Control Systems	2017	Schnitzer is in the process of obtaining authority to construct permits for new process enclosure and emission control system for the shredding operations. Additionally, Schnitzer is in the process of designing an enclosure for the Joint Product Plant (JPP) which includes an emission control system and enclosures for treated shredder residue and Aggregate awaiting infeed into the system. Our research indicates that the JPP emissions controls are exempt from BAAQMD permitting requirements. A request for determination on permitting exemptions will be submitted to BAAQMD for review and approval prior to initiating construction on the JPP project. We believe these projects will provide significant reductions in fugitive emissions from our facility.	Reduction of fugitive emissions from shredding and metal separation activities.
4	All Operations	Train select yard employees on CARB VEE observations	2016	Send select facility employees to CARB sanctioned VEE training.	

Compliance Schedule for the EMP

6-4-404

A. *Determination of Completeness* – After facility submits the initial EMP, District APCO will make a completeness determination. If the EMP is determined to be "complete," additional revisions to EMP for completeness determination is not required. If the EMP is deemed "not complete," facility must address the APCO's "Basis for Determination and Required Correction Action" and submit revisions to the EMP. Include the date, description of the revision and corresponding page number(s) and section number(s) of the EMP where the revision can be located.

B. *APCO Recommendations to EMP and Determination of Approvability*– Acknowledge acceptance or rejection of each of the APCO's recommendations. For each of the accepted recommendations, describe the measures to be implemented and include the date of proposed implementation. If the facility rejects a recommendation, provide a detailed basis for that rejection.

A. Determination of Completeness (6-4-404)

Date of EMP:

Date of Initial EMP Submittal	(FOR APCO USE ONLY) APCO Determination of Completeness	(FOR APCO USE ONLY) Basis for Determination of Completeness and Required Corrective Action
	☐ Yes, EMP is complete. ☐ No, EMP is not complete. Facility must detail and submit revisions below.	

TO BE COMPLETED IF EMP SUBMITTAL IS DEEMED "NOT COMPLETE" BY APCO.
List all EMP revisions submitted to the District for completeness determination.
Include the date and description of the revision and corresponding page number(s) and section number(s) of the EMP where the revision can be located.

Section #	Date of Submission of Proposed Changes	Description of Revisions	Corresponding Page and Section number(s) in EMP	(FOR APCO USE ONLY) APCO Determination of Revision
1				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
2				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
3				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
4				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:

A. Determination of Completeness (6-4-404)

Date of EMP:

TO BE COMPLETED IF EMP SUBMITTAL IS DEEMED "NOT COMPLETE" BY APCO. List all EMP revisions submitted to the District for completeness determination. Include the date and description of the revision and corresponding page number(s) and section number(s) of the EMP where the revision can be located.				
Section #	Date of Submission of Proposed Changes	Description of Revisions	Corresponding Page and Section number(s) in EMP	(FOR APCO USE ONLY) APCO Determination of Revision
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:
				☐ Yes, revision accepted ☐ No, facility must submit additional revisions Basis:

A. APCO Recommendations to EMP and Determination of Approvability (6-4-405)

Date of EMP: **5/19/15**

Provide determination of acceptance to APCO recommendations. Include the determination of acceptance by the facility's Responsible Manager and the basis for rejecting any APCO recommendations. If recommendation is accepted, include measures to implement APCO recommendation and the proposed date of implementation.

Section #	(FOR APCO USE ONLY) APCO Recommendation	Acceptance of APCO Recommendation	If NO: Basis for Rejecting APCO Recommendation	If YES: Measures to Implement Recommendation	Proposed Date of Implementation	(APCO USE ONLY) APCO Approval of Response
1	Enclose the shredder residue storage areas as a future measure.	☐ Yes ☐ No	Schnitzer is willing to consider enclosing residue storage areas in the next 5 years. However, we are currently evaluating more efficient emission containment for the shredder and operations which we believe will yield significant reductions in fugitive emissions. The high moisture content of the shredder residue (15% to 25% by weight) already helps to minimize fugitive emissions from these stockpiles . ***District Response:*** *Please describe the evaluation being conducted to further contain fugitive emissions from operations. Clarify the scope of work to be completed by the proposed implementation date of 8/2020.*		8/2020	☐ Yes ☒ No
		☐ Yes ☐ No		Schnitzer is in the process of obtaining authority to construct permits for new process enclosure and emission control system for the shredding operations. Additionally, Schnitzer is in the process of designing an enclosure for the Joint Product Plant (JPP) which includes an emission control system and enclosures for treated shredder residue and Aggregate awaiting infeed into the system. Our research indicates that the JPP emissions controls are exempt from BAAQMD permitting requirements. A request for determination on permitting exemptions will be submitted to BAAQMD for review and approval prior to initiating construction on the JPP project. We believe these projects will provide significant reductions in fugitive emissions from our facility		☒ Yes ☐ No
2	Describe the management and monitoring practices associated with the loading of shredder residue on trucks or any other form of conveyance at the facility.	☐ Yes ☐ No		1) The shredder residue and Aggregate has a high moisture content of approximately 15% to 25%. This helps to minimize fugitive emissions while handling/loading/conveying this material. 2) Addtionally, the Aggregate infeed area and the Residue loading area are abated by the DUST BOSS industrial mister turbine. 3) Loading equipment	10/2015	☒ Yes ☐ No

				operators will be trained to limit the fall of material when loading trailers by loading as close as feasible to the top of the trailer. 4) Once shredder residue trucks are loaded, they are tarped prior to leaving the facility, further minimizing fugitive emissions.		
3	Provide onsite staff with training through the California Air Resource Board (CARB) to obtain and maintain a visible emissions evaluation (VEE) certification in accordance with US EPA Method 9.	☐ Yes ☒ No	We have no history of opacity exceedences at the facility and do not believe it is necessary to obtain VEE certification, especially for non point source fugitive emissions.. ***District Response:*** *Please consider hiring VEE certified consultants to ensure timely VEE evaluations are conducted when necessary.*		12/2016	☐ Yes ☒ No
		☐ Yes ☐ No		VEE training will be provided to select facility staff through the CARB training program.		☒ Yes ☐ No
4	Shred all scrap to the ground each day to minimize fugitive emissions.	☐ Yes ☐ No	While it is Schnitzer's goal to always shred as much scrap as possible on any given day, the following factors prevent us from committing to this suggested BMP: 1) Variable PG&E power usage curtailment schedule which can restrict the time of day we can operate the shredder, 2) We do not shred every day of the week due to maintenance, staffing considerations, and low incoming volume 3) Scrap is received throughout the day, even after shredding operations have ended for the day, 4) the inflow volume in a given day can exceed our ability to shred all material in a standard shift. Further, "tin" stockpiles are not significant sources of fugitive emissions. Implementation of this recommended BMP would unfairly and unnecessarily restrict facility operations. ***District Response:*** *Incorporate a daily standard operating practice as part of facility's BMP to shred scrap metal materials to the ground each day, with the understanding that the listed circumstances may prevent doing so on certain occasions.*			☐ Yes ☒ No

		☐ Yes ☐ No		While it is Schnitzer's goal to shred as much scrap as possible on any given day and preferably to the ground, the following factors prevent us from always achieving this goal: 1) Variable PG&E power usage curtailment schedule which can restrict the time of day we can operate the shredder, 2) We do not shred every day of the week due to maintenance, staffing considerations, and variable incoming volume 3) Scrap is received throughout the day, even after shredding operations have ended for the day, 4) the inflow volume in a given day can exceed our ability to shred all material in a standard shift. Further, shredder feedstock stockpiles are not significant sources of fugitive emissions. Implementation of this recommended BMP would unfairly and unnecessarily restrict facility operations.		☒ Yes ☐ No
5	All conveyance equipment must be equipped with water sprays or misters.	☐ Yes ☐ No		Schnitzer already utilizes misters, conveyance covers, high moisture content and industrial mister turbines (DUST BOSS) to minimize fugitive emissions throughout our operations. However, due to the exceptional drought that California is facing, we are reluctant to add to our water usage significantly. Excess moisture also reduces the separation efficiency of our recycling process. Additionally, Schnitzer is in the process of permitting enclosure/control BMP's that we will provide significant reductions in fugitive emissions for the shredder and joint product plant.		☒ Yes ☐ No
6	At the container loading areas, use water sprays or hoses when loading operations are underway.	☐ Yes ☐ No		This will be clarified in the EMP. Schnitzer will install a DUST BOSS industrial mist turbine which will be operated as necessary to minimize fugitive emissions. The Dust Boss provides fugitive emission suppression and uses less water than a hose.		☒ Yes ☐ No
7	Use both onsite water misters at the main shredder pile during transport or conveyance of materials. Install a second water mister at the opposite side of the shredder where there is an existing mister already to further reduce emissions.	☐ Yes ☐ No	We have already installed a Dust Boss Mister at the prevailing upwind side of the infeed conveyor and stockpile. Addition of a second dust boss on the opposite side would be largely downwind and result in water being wasted. With the current California drought, we are trying to minimize our water usage and still maintain adequate fugitive emission controls.			☒ Yes ☐ No

8	Two-thirds of the area beneath the shredder is concrete slab. Extend the concrete slab for the entire area that contains scrap metal or shredded material.	☐ Yes ☐ No	Schnitzer believes it would provide more immediate and tangible benefits to pave high traffic areas rather than surfaces that are usually covered by scrap metal and therefore are not a source of fugitive emissions.	Schnitzer is committed to increasing the amount of paved surfaces throughout the facility over the next 5 years. ***District Response:*** *Please specify which unpaved areas are in the facility's plans to be paved over the next 5 years.*	9/2020	☐ Yes ☒ No
		☐ Yes ☐ No		Schnitzer is committed to increasing the amount of paved surfaces over the next 5 years. Areas of new paving will take place in the following order of priority: 1) Truck traffic lanes that are not already paved, 2) Internal equipment traffic routes that are not already paved, 3) Material stockpile areas that are not already paved		☒ Yes ☐ No
9	Develop and implement a program for scheduled monitoring of all stockpiles with a temperature probe/gun and maintain a record of all monitoring activities.	☒ Yes ☐ No		A program to monitor stockpiles (Shred Feedstock and Shredder Residue) is already in place as noted in the current EMP. Night security guards monitor the piles with an infrared camera. A log or record of activities will be created and implemented. ***District Response:*** *Please confirm that perimeter infrared monitoring is adequate to determine hot spots in stockpiles.*	10/2015	☐ Yes ☒ No
		☐ Yes ☐ No		A program to monitor stockpile temperature fluctuations (Shredder Feedstock and Shredder Residue) is already in place as noted in the current EMP. Night security guards monitor the pile temperatures with an infrared camera. A log or record of temperature monitoring activities will be created and implemented. Perimeter pile monitoring with infrared cameras is a standard industry practice used by other shredders in California and througout the United States for detecting potential hot spots that may result in a fire. Radiant heat from hot spots in the center of the pile will cause a rise in temperature on the surface of pile which is expressed as an anomaly in relation to ambient temperatures. Large temperature differentials will result in operations staff being contacted to investigate potential causes		☒ Yes ☐ No

Appendix

If additional information are to be included in the EMP, identify the associated Appendix # as "*#*" in the text box of the specific table.

In the table below, note the Appendix # and provide the Page # and Section # of the EMP where the material references.

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