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SENIOR OPERATOR AT THE HYPERION TREATMENT PLANT

James Howe Van Norman

Interviewed by Andrew D. Basiago

Completed under the auspices
of the
Oral History Program
University of California
Los Angeles

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Photograph courtesy of James Howe Van Norman.

CONTENTS

BIOGRAPHICAL SUMMARY

PERSONAL HISTORY:

Born: March 15, 1894, Santa Ana, California; moved to Los Angeles in 1902.

Education: Public schools in Los Angeles.

CAREER HISTORY:

Bench molder, McCann Mechanical Iron Foundry, Los Angeles, 1911-12.

Acetylene-torch operator, Union Iron Works, Los Angeles, 1912-16.

Welder and burner, Camp Raymer, Los Angeles City Department of Water and Power, 1916-17.

Ship welder, Los Angeles Ship Building and Dry Dock Company, 1917-21.

Oil well driller, Signal Hill, Los Angeles, 1921-22.

Dragline operator, Thomas Haverty Company, Los Angeles, 1922-24.

Clamshell operator, dragline operator, screening plant operator, Hyperion Treatment Plant, Los Angeles, 1924-30.

Chief operator, Hyperion Treatment Plant, Los Angeles, 1930-50.

Senior operator, Hyperion Treatment Plant, Los Angeles, 1950-55.

AFFILIATIONS:

Fraternal Order of Masons.

Order of the Mystic Shrine.

INTERVIEW HISTORY

INTERVIEWER:

Andrew D. Basiago, Interviewer, UCLA Oral History Program. B.A., History, UCLA.

TIME AND SETTING OF INTERVIEW:

Place: Van Norman's residence at the Huntington Retirement Hotel, Torrance, California.

Dates: March 10, 17, 1986.

Time of day, length of sessions, and total number of hours recorded: Each session started at nine in the morning and ended at noon. A total of four hours of conversation was recorded.

Persons present during the interview: Van Norman and Basiago.

CONDUCT OF INTERVIEW:

In preparing for the interview, Basiago reviewed articles in the **Los Angeles Times** from the completion of the Hyperion Treatment Plant in 1924 to the present, looked at sources in the Water Resources Center Archives at UCLA, and studied academic histories. He also interviewed William F. Garber, retired chief engineer of the Hyperion Treatment Plant, and Rimmon Fay, a Venice-based marine biologist who has been critical of the plant's adverse effects on marine life.

The interview includes anecdotes on Van Norman's childhood in turn-of-the-century Los Angeles; follows his work experience as an oil well driller, clamshell operator, ship welder, and dragline foreman circa World War I; and records events and operating procedures at the Hyperion Treatment Plant. Special emphasis is placed on efforts to improve the facility over the years, the plant's impact on the environment, and the perplexing problems of modern-day sewage treatment and residue disposal.

EDITING:

George Hodak, editorial assistant, edited the interview. He checked the verbatim transcript of the interview against the original tape recordings, edited

for punctuation, paragraphing, and spelling, and verified proper names. Words and phrases inserted by the editor have been bracketed.

The edited transcript was sent to Van Norman in February of 1987. He made some corrections and additions and returned the manuscript in April of the same year.

Alex Cline, assistant editor, prepared the table of contents, biographical summary, and interview history. David P. Gist, assistant editor, prepared the index.

SUPPORTING DOCUMENTS:

The original tape recordings of the interview are in the university archives and are available under the regulations governing the use of permanent noncurrent records of the university. Records relating to the interview are located in the office of the UCLA Oral History Program.

TAPE NUMBER: I, SIDE ONE

MARCH 10, 1986

VAN NORMAN: My name is James H. Van Norman. I was born in Santa Ana, California, March 15, 1894. [I] lived on a small farm, later moved into the city. On Easter Sunday, 1902, my father decided to move the family, which consisted of my mother, two older sisters, one older brother and one younger brother. Gordon, the youngest, was born in 1900. We moved to Los Angeles [on] Easter Sunday, 1902, to Twenty-Ninth [Street] and Maple Avenue in Los Angeles. I started grammar school and attended two grammar schools early. One was at Twenty-Eighth [Street] and San Pedro Street, and the other one was at Thirtieth [Street] and about, I don't know, Grand Avenue or one of those streets--it was a Thirtieth Street school. At the Twenty-Eighth Street school, I'll relate now an incident that happened there. There was a Professor Monlox there that briefed us on Halley's comet. This was before 1910, because he was talking about when it was going to come here. And what it consisted of (Halley's comet), he said, was aggregate, just a collection of debris and other things, and he told us the speed of it and so forth and so on. So we got a briefing on Halley's comet then.

BASIAGO: What were his estimates in terms of its size and speed and what it was made up of?

VAN NORMAN: His estimate of the speed at the time, and I'll relate you that, was twenty-two miles a second. There is one thing that I might add to this now that I found out in studying Halley's comet. Halley's comet at the present time, as it is passing here, is traveling sixty times faster than it travels when it reaches the other end of its orbit, which is half of seventy-six, or thirty-eight years away. And [when] the gravity pull is very small on it, it slows down to a walk. So how Mr. Halley was able to correctly predict the return of Halley's comet in 1910 without the aid of the modern computers and everything they have is beyond my understanding. I don't know how he did that. It came by two times, I think--prior to that once and then in 1910, when I saw it. I lived on Zamora Street in Los Angeles, and Halley's comet was visible, all you wanted to look at. It doesn't move through the sky like a meteor, it's just like the moon. You just look up there and here's this ball, the head of it, with a tail which I read is millions of miles long. I estimated one time it was a thousand miles long. It's millions of miles long, the tail is. Ironically, we passed through the tail of Halley's comet in 1910--the earth did--and nobody suffered or even knew it.

Oh, one of the people that I saw during my school days was Buffalo Bill Cody. He came to the [Los Angeles]

Coliseum--no, Exposition Park, well, that's the same place where the Coliseum is--and he put on a show there, a Wild West show, riding and shooting clay pigeons and stuff like that. And I remember that--

BASIAGO: Standing on horses?

VAN NORMAN: Oh, yeah, yeah. He rode out there with all this Indian regalia on. And he was a noted figure, and I suppose his reputation as wild Bill, Buffalo Bill Cody, had a lot to do with killing buffaloes, I presume. I don't know all the history about why he's noted. Old-timers remember him well.

Another incident that I will relate to you that I saw at the time was when a utility company--probably the water department of the city of Los Angeles [then, Los Angeles City Bureau of Water Works and Supply]--was digging up in front of our place at Twenty-Ninth and Maple. They dug up a couple of solid cannonballs which they said were probably left there when one of the early crusaders came through here, [John] Frémont or whoever it was. They were solid cannonballs; they had no explosives in it, just solid ball. And they dug those up out of the street.

BASIAGO: Were there any other colorful figures from the American West that you saw as a child?

VAN NORMAN: I was trying to think. No, none that I can recall. Of course, most of the personalities that I saw

when I was a child would have been people on the stage like Sarah Bernhardt. I don't know whether Gabby Delese was ever here or not. Gabby Delese was an actress in France, and I think she had an affair with a king over there, or something, which brought her into prominence. I think I saw her on the stage.

BASIAGO: Any carnival figures in Los Angeles that you witnessed?

VAN NORMAN: Carnivals? I went to, of course, Barnum and Bailey circus. I visited that a couple of times when it came here. They used to show at the corner of Washington [Boulevard] and Main Street in Los Angeles. There was a park there--I can't recall the name of it. But I recall there was a man there that participated in it (must have been about 1902). Donahue was his name, and his shoes are still on display at the Helms Collection [Helms Bakery, Los Angeles] of things here.

BASIAGO: I'm trying to draw on your memories of things that might have really excited you as a child, things that were neat at the time that you had to go see.

VAN NORMAN: Well, one thing that I did see when I was able to go to a prize fight, I saw a forty-two-round fight out in Vernon, California, between Frankie Connely and Monty Atell. It lasted from early afternoon till almost evening. At that time forty-five rounds was permitted, and

they fought forty-two rounds of it. Ironically, on the same day, up in Richmond, California, there was a fight between, I think it was Ad Waldgast and Battling Nelson. And it lasted either forty or forty-one rounds. There were two over-forty-round fights that same day, believe it or not. The limit of rounds in those days was forty-five rounds. That's one thing that I saw that I thought was something.

BASIAGO: The other day you mentioned you saw a famous dirigible pilot named Roy Kananbenshu. What was his act all about?

VAN NORMAN: Kananbenshu was a dirigible pilot. He had a unique dirigible. It had no engine in it to propel it; he operated it, believe it or not, with a pair of oars. He rowed his way in the air just like you would row a boat. And then rising or descending, why, he would retreat to the tail end to go up, and come to the front end to come down. I didn't notice at the time any other rudder or anything he had on there. He undoubtedly had a rudder on the back that guided him in the air as far as sideways was concerned. I don't remember him being hired by any commercial outfit or anything for that reason. It was just because aviation was in its sort of infancy and that was the thing to do. Dirigibles were quite well known all over the world. The Germans-- I guess zeppelins were the first

lighter-than-air outfits that came into the world. And his dirigible was a small one, but it was different from any other dirigible I ever saw, because they were all propelled by motor-driven propellers.

BASIAGO: Did the oars actually move the craft through the air or is that just a stunt?

VAN NORMAN: To tell you the truth, I don't think his invention was anything to be noted as a success, because it stands to reason if there was any wind velocity at all, why, he'd just be stopped. He'd just be treading water, so to speak. It was unique and all that--I have a picture of it here in a publication that shows him in it--but I don't think it ever amounted to anything.

Going on a little further, in 1910-- of which I also have a magazine, along with Kananbenshu's picture, and on the same page is the first air meet held in the United States of America. It was held at Dominguez Junction in the Dominguez Hills in 1910. I rode a bicycle out there. That will make me sixteen years old. Yeah, make me sixteen years old. I rode a bicycle out there and witnessed that first airplane meet that was held. They had important people like Ballerio from France and a fellow named Arch Hoxsey that broke a world's record there. I think he went fourteen thousand feet high, and that was the highest anybody had ever been known to go on an airplane.

BASIAGO: Seems that pretty soon after these events--after Halley's comet and after going to that air show--you began to work.

VAN NORMAN: Yes.

BASIAGO: What was your first job?

VAN NORMAN: I related about Halley's comet, didn't I?

BASIAGO: Yes, you did.

VAN NORMAN: Okay.

BASIAGO: You went to work in 1911. What was your first job?

VAN NORMAN: My first job, in 1911, was at the McCann Mechanical Iron Foundry on Long Beach Boulevard in Los Angeles. I went in as an apprentice, a molder, and was taught how to bench mold, as they call it. Those are small castings like plumbing fittings and things like that of cast iron. We poured our own--drew hot molten iron out of the cupola and took it over in a ladle and poured it in. We usually poured our molds and also shook them out as it became necessary to retrieve the sand. You use the molding sand over and over. Then there is also another tradesman in there. He's called a pattern maker. He makes the pattern in wood; he makes whatever object you want to have cast. He makes it, then he gives it to you. And you put it in this box and put sand around it and tamp it down, then withdraw the mold, then pour the molten metal. If

there's a hole through it like a fitting, then you insert a core. The core is made of special sand and then baked. You put a core in there, and after you pour the iron, why, then that core falls out. They put it in a shaker and shake that out. That's the way they cast the fitting. And then of course, if there's machine work to be done, like putting threads in them, that's done in a machine shop. After the foundry I went to work for the Union Iron Works.

BASIAGO: When was that?

VAN NORMAN: That was in 1912. They were located at the time on Palmetto [Street] and Mateo Street in the city of Los Angeles, and across the street there was a small steel-rolling mill. In 1924--I understand from recent information I got--both of them moved out to Torrance, California, because that was created as an industrial city. Torrance was originally incorporated because the land was cheaper than in Los Angeles, and that's why they moved. And I worked with Union Iron Works from 1912 till 1916. Then I went to work for the water department of the city of Los Angeles on the distribution system of the water throughout the San Fernando Valley. I worked at Camp Raymer, which is located at Raymer Street and Sepulveda Boulevard. There was a large construction camp there. There were about four hundred people employed to install the piping necessary to carry water to the San Fernando

Valley, which at that time was highly agricultural. And by the way, the city of Los Angeles owns all of the water rights under the San Fernando Valley, and you can't own your own land. I think they still own the Owens River water rights up there that most everyone is familiar with, where they had a big war between the farmers up there and the city of Los Angeles over the [first Los Angeles] Aqueduct being built through there.

BASIAGO: Let's consider that historical controversy for a minute. Do you recall anything about that very heated situation between the farmers of the Owens Valley and the city of Los Angeles, and its attempt to acquire water from Owens Valley?

VAN NORMAN: Only from what I have read, and I have no what we would call inside information regarding it. It's just all public knowledge. But the city of Los Angeles through William Mulholland acquired all the water rights in the Owens Valley. And that took away the water from the farmers that owned land there. And several dynamite bombings followed, apparently by the farmers up there. They blew up the aqueduct, I think, on more than two occasions. I recall at least two times that I read about it. They took dynamite and blew the pipeline to pieces and the delivery of water and the water line that came from Owens Valley to the city of Los Angeles.

BASIAGO: A second part of that area of history has centered around the ownership of San Fernando Valley land by some of the leading citizens of Los Angeles at that time--the mayor, Fred Eaton, and Harrison Gray Otis, the general who founded the **Los Angeles Times.** Having worked at Camp Raymer right there at the waterworks for the San Fernando Valley, do you have any idea why the Owens Valley aqueduct ended there in the San Fernando Valley rather than in the city proper, as the [Federal] Bureau of Reclamation had recommended?

VAN NORMAN: You're asking the question why was the water from Owens Valley impounded out here at the San Fernando Reservoir, which it was known as at that time. (Now it's the Van Norman Dam.) Well, I would say that that was still at an elevation where they could gravitate all over the Los Angeles and San Fernando valleys and gravitate as far as San Pedro. Then they built another reservoir in San Pedro. It's still there. And they draw water from that to feed the whole San Pedro area with water. So I would say that was just a place that was appropriate and provided an area there to make a reservoir and maintain the necessary pressure that it takes to deliver to all of its outlets.

BASIAGO: Right. Some historians have claimed that the aqueduct was built to raise the land values there in the San Fernando Valley and enrich the people who would bring

the water to the city. They've always wondered why, if the Bureau of Reclamation had recommended the aqueduct water be impounded further-- So you're giving the technological reason.

VAN NORMAN: Yeah, yeah. I know your point there. You're getting into the political end of it. And the, well, H. [Harvey] A. Van Norman--

BASIAGO: Let's talk about him. Who was he? He was a relative of yours.

VAN NORMAN: A first cousin, yeah. Well, I know this: at his death he left eighty acres of land in the San Fernando Valley that he owned, and that was distributed amongst his heirs--not me. [laughter] He distributed it to the next generation, to the children, and then they all got a certain portion of it. Whatever the grandchildren were-- His brother's children, and stuff like that. H.A. had no children. His brother Claude [Van Norman] had several children. And then there was one of his sisters married to a fellow named Scott, and they had two boys that I know of. But other than that-- Now, this I can't verify, and I wouldn't even comment-- I understand that Mulholland had real estate holdings in the San Fernando Valley. I have no idea of how much or where or anything.

BASIAGO: I believe he had a large orange ranch.

VAN NORMAN: He did?

BASIAGO: A large citrus ranch near Van Nuys.

VAN NORMAN: Well, I guess that's what Harvey's was. It was an orange ranch and he had eighty acres.

BASIAGO: Did Harvey Van Norman, your cousin, get you the job at the Raymer plant in 1916?

VAN NORMAN: Did Van Norman what?

BASIAGO: Did Harvey A. Van Norman, who was then the assistant to--

VAN NORMAN: To Mulholland.

BASIAGO: Yeah, to Mulholland at the Department of Water and Power. Being your cousin, did he get you the job at that site?

VAN NORMAN: [laughter] I would have to say in all honesty, or factually, that he probably helped me get the job, if you want to call it that way. I went out there and signed up. He didn't personally-- Well, I wouldn't say that. Well, it is necessary to comment on that to this extent: Bill Mallanger hired me, and Bill Mallanger was under H. A. Van Norman. So if anybody can make any linkage there, well, that's up to them. I would say that Harvey Van Norman was instrumental in helping me. Well, like when I went to work, for instance, for [Thomas] Haverty Company, why, he could have told them that I was coming out there to apply for a job. I went there and applied for a job through the superintendent.

BASIAGO: He was much older than you, wasn't he?

VAN NORMAN: Harvey?

BASIAGO: How much older was he?

VAN NORMAN: Fifteen years.

BASIAGO: Fifteen years? So he was pretty much a big brother?

VAN NORMAN: Pardon?

BASIAGO: Pretty much a big brother figure?

VAN NORMAN: Yeah, yeah. Well, I probably had as much contact with H. A. Van Norman as any of my two brothers. Neither one of them ever worked for the Water and Power. I remember one time my name was put up for a raise, and there was a [Los Angeles City] Board of Public Works [Commissioners] member--I can't remember his name. He didn't turn out to be a particular friend of mine because a guy told me he made this remark when my name came up for a raise. "Why," he said, "there's too damn many Van Normans working for the city now." [laughter]

BASIAGO: Your boss there was "Wild Bill" Mallanger. How did he get that nickname? What do you remember about Bill Mallanger?

VAN NORMAN: He came from the building of the aqueduct down there and took charge. He got his reputation as Wild Bill Mallanger-- Well, I can tell you why in one way. He drove a Ford automobile and he had a Ruxtel axle in it, and it

was his delight. In fact, it cost him his life. He died in an automobile crack-up on Chalk Hill right out in the [San Fernando] Valley here. He ran out into a ravine or something and killed himself. And he drove a car like a wild man. But why he-- I think it's just his personal actions and things that gave him the reputation as Wild Bill Mallanger.

BASIAGO: Okay. So, let's talk about Camp Raymer. That was at Raymer and Sepulveda. What were you actually doing? What was your job?

VAN NORMAN: My job there, I was hired as a welder and burner, acetylene-torch burner they call them, the cutter. Are you familiar with the acetylene torch? They use it to weld with. They have a welding torch and you have a cutting torch. And you heat whatever you're going to cut, and then you put the oxygen to it--to the torch--and the oxygen with the heat melts the iron immediately and just cuts a hole through there. That's what it amounts to.

BASIAGO: What was the camp itself working on? What was the main project?

VAN NORMAN: My first-- And that's the first place that I saw a mechanical ditchdigger they had out there. They had a great big tractor outfit that straddled the ditch and dug a ditch about, let's say, six feet. Well, that pipe was a 54-inch pipe, so that's getting close to five feet that

they were going to put in a trench. So it probably dug close to an eight-foot ditch, and let's say eight to ten feet deep.

BASIAGO: Were there any other archaeological discoveries that you remember from these early years in Los Angeles? You mentioned cannonballs from John Frémont's party.

VAN NORMAN: The only things that I can relate to which fits that category, archaeological objects, was clamshells that we dug up. They were dry. And when I was on Signal Hill drilling in 1921 at two thousand feet, why, we ran into clamshells there. Two thousand feet down.

BASIAGO: Two thousand feet.

VAN NORMAN: How did we get them? In a drilling well. There's two types of drilling a hole in the ground. When I worked in Santa Paula, I worked for the Oakridge Oil Company. That was standard tools. They pounded their way down. They just lift a bit up and drop it and just hammer their way down. Are you familiar with a rotary rig?

BASIAGO: Yeah, I think so.

VAN NORMAN: Well, in other words, to liken it to a carpenter's tool, it's just an extended bit and it rotates and it bores its hole in the ground. There are suitable bits to fit the demand. In ordinary digging you have a fishtail bit. It's built like that, and it goes around with sharp edges on it and just cuts a hole in the

ground. You circle that mud down through there, and the mud is of such consistency that it picks up all of the tailings--or in the case of boring a hole with an auger, the borings--that come out of there. It picks that up and carries it up to the surface.

BASIAGO: In Signal Hill, where you found these shells at two thousand feet, this was what, an oil well?

VAN NORMAN: Oh, yes. That's what we drilled there for, yeah.

BASIAGO: How do you think the shells got that far down there? Was it from the--?

VAN NORMAN: That was ocean bottom at one time. It's not unusual to run into an underground stream. How do I know? Because sand and gravel came up over, same as you go out in a riverbed and get it. Down there at two thousand feet deep we ran into a river, a stream of water there, and it had sand in it. Just the same as sand out in a riverbed, sharp rock.

BASIAGO: What happened between 1915 and 1921? What were you working on those years, we'll say, during America's entry into World War I? What were you working on then?

VAN NORMAN: I worked in an L.A. shipyard. Does it say so on my list there? Yeah. My previous experience educated me [for], or served my apprenticeship as, a "layer-out." And when you lay out all of the work for a ship that was

built prior to 1918-- I went there in about 1917 or '18. Well, I was there when the war ended, so I'd been there a couple of years. I was around in my wanderings around. I went from-- Where did I go? I jumped around, but I went down to Long Beach in 1921. I worked '21, maybe a little of '22, drilling on the hill. Well, I did, because I was there a couple of years, because I graduated from a roustabout--Well, they don't call them roustabouts, they call them a drilling crew. There's five in a drilling crew, and I've worked all five positions. And finally I was promoted to a driller and I drilled. And what was the question about?

BASIAGO: Well, you told me-- You said that in 1917 you went to work building ships in Los Angeles, in the L.A. harbor.

VAN NORMAN: Yeah.

BASIAGO: In 1921, you said that you were an oil well driller in Signal Hill.

VAN NORMAN: That's right, yeah.

BASIAGO: Nineteen twenty-two, you went to another firm. The Thomas Haverty Company? What were you doing there?

VAN NORMAN: Yes. I was operating a mechanical device here called a backfiller and operating a dragline. A dragline, you've seen them working, digging with a disk. They cast out a big block that's a cubic yard or however big the job

is. In the coal industry they have enormous ones. But you cast that out on a cable, drop it down, pick up a yard of dirt, bring it back up and elevate it up to the top of a grand swinger onto an urn, dump it, then come back and repeat the act. And a backfiller is after you dig that hole and pile the dirt up there, then they come along and put pipe in there. In this case it was sewer pipe, the north outfall sewer, sections of the north outfall sewer pipe down in there. Then you come along with this backfiller, pull the dirt in, and then fill the hole up again. Oh! Archaeological findings. In 1923 or thereabouts--the couple of years that I worked for Haverty before I went to Hyperion [Treatment Plant] in '24--we dug up a man and a woman's skeleton in standing position.

BASIAGO: How far down were they?

VAN NORMAN: Roughly twenty feet deep. We kicked the head and the stuff around there for a few days and put it back in the ditch and covered it up. Mr. Hess, who was an archaeologist of the Haverty Company, came down there and had us dig down and retrieve those. He took those and sent them to the American museum of Indians, or something, back in Washington, D.C., or wherever it was located. What is that that they call that place where all of the stuff is?

BASIAGO: The Smithsonian Institution.

VAN NORMAN: Yeah, yeah. It's an institute of the American

Indians, as I recall it. That might be a department of the, yeah, the Smithsonian. That's one place, my friend, I'd like to see. Jesus, it covers **thousands** of acres. It would take you months to go through there and look at the things there. [Charles A.] Lindbergh's airplane is there, everything of consequence. I've read about all that.

BASIAGO: What was the talk about these skeletons that you found? Why were they in an upright position, and who were they?

VAN NORMAN: The reason they were there--this is the supposition: at one time the Los Angeles River emptied into Playa Del Rey, through Culver City and out through the La Cienega swamp there and through that country where the sewer line is laid.

BASIAGO: Is that the Ballona wetlands?

VAN NORMAN: Yeah, I guess that would be it, yeah. **Cienega** means "swamp," I think, in Spanish. That's right over here at Crenshaw [Boulevard] and-- Where is the Broadway? I was thinking about that the other day. That's where the sewer line came down. I can't remember what street it came down. Coliseum or what? What is the street right south of the Coliseum? Is that Coliseum?

BASIAGO: Is that Crenshaw Boulevard you're talking about?

VAN NORMAN: Well, I'm talking about-- Yeah, I worked at Haverty, and he had a contract up to Crenshaw Boulevard,

I'm quite sure. And that's when I finished up. That's where the May Company and the Broadway are. There's a street that runs down in between, and that's where the sewer line goes. The outfall sewer, the north outfall sewer, the last one that they built.

BASIAGO: So, you were having some very diverse work experience here. You were working as a welder, you worked in shipbuilding, as an oil well driller, and a dragline operator. All these experiences seem to lead you, in 1924, to the construction of the Hyperion plant. How did you get caught up in that?

VAN NORMAN: Well, you know, what qualifies me for my-- Yeah, that's what you're asking me. What qualifies me to, to-- All right. When I went under Hyperion, I didn't hire out. I think on that little card you have, it said it was labor.

BASIAGO: Right. Your time card.

VAN NORMAN: What we did, they had a fellow named Alexander and a fellow named-- Oh damm it, I wrote them down there someplace. But anyway, Alexander was a machinist foreman hired by H. A. Van Norman to come down there to set up all the machinery and everything. And us guys that came in, came in and worked as assistants under the direction of a master machinist. They have another name for it, I can't recall it. They have a name for a person that is adept at

that. Ashley was this other guy's name. He installed the machinery in the old reciprocating plant, which is the [Southern California] Edison [Company] plant in Hermosa Beach. Do you know where that is?

BASIAGO: Yeah, I think I do.

VAN NORMAN: It's been there for years. It was there-- He had worked before Hyperion in there, so they were both adept at installing machinery, let's say. I don't want to call them shipwrights. There's another name they call them that specifies a man that sets and installs the machinery. Anyway, they were both journeyman machinists. And Alexander had charge of the installation and the starting up of the machinery in the south plant of Hyperion, the screening plant. That's where I went to work. But I soon-- On my hire card, it alludes to that. I was soon moved up to the position of operating a PH. Now, that doesn't mean a damn thing to you. A PH is a pulley-and-harness-fixer dragline. They brought it down there to dig a hole and bury the crap that we-- The screenings. They had no other disposition of them, so they dug holes in the sand hills and I immediately--having prior experience in running a dragline--was moved up to a dragline operator. And I later stood examination for a screening plant operator and later stood examination for the chief operator of the Hyperion screening plant.

BASIAGO: So this dragline operation, this was for a land-fill operation?

VAN NORMAN: Dragline operation is to dig a ditch, excavation, or what have you, move earth to put a base or to dig the foundation for a building or anything else.

BASIAGO: This was in the construction facility then, not a short-term place to put the sewage until the--

VAN NORMAN: Oh, no. Well, now wait a minute. In this particular adaptation, we used the dragline to dig a hole up there to bury the screenings. But it was the same-- Now, wait a minute, I have to qualify that. There are at least two pieces of equipment on a dragline. You have a drag bucket. You throw it out like that, drop it, pick it up. Then you have a-- Did you ever see a clamshell? Okay. I had it on the end of mine instead of having a drag bucket. On the Haverty job I used a drag bucket. On the Hyperion job I used a clamshell, because that went down like this.

BASIAGO: Which is a big metal hand that reaches down and grabs.

VAN NORMAN: It's just a clamshell, two halves of a clam, and it opens like that. It's got two jaws with steel teeth out here. Then you pick up the raising cable and the closing cable, and that closes the bucket and it comes together. Then you stop that and then you pick it up,

swing it in the air, take it over here and dump it, and come back and get another clamshell full.

BASIAGO: So this was in building the foundation to the Hyperion facility, or was this where the--?

VAN NORMAN: No, I didn't operate the-- That was contract. All of the excavation for the buildings and stuff was contract.

BASIAGO: So the reason you were digging these holes in the ground was to put sewage in there?

VAN NORMAN: Screenings they call it.

BASIAGO: Screenings. This was filtered sewage.

VAN NORMAN: That's right. The product of the screens, it tells it in the-- By the way, I didn't tell you this. I've got a book here that a girl has-- Gee, I've got her name and address and everything. It has a synopsis of this, more or less, what we're going through. She interviewed me because she-- I'll show you the thing. If you want to borrow it or-- I don't know whether you can-- Down at Hyperion, you know what they did? They took it and xeroxed the whole thing. You can do the same damn thing if you want to, because I'm not obligated to her in any way. She sent me a copy. But she interviewed me on the history of Hyperion and got a lot of facts herself from the city hall, because a lot of the dope that I have here I got out of her book. I looked at it the other day. In other words, I

don't remember the date and the year when they quarantined there. But she found that out from city hall records. That was in 1944 or something. I've got it down in there. I'll show it to you.

BASIAGO: 'Forty-three.

VAN NORMAN: I'm referring now, at Hyperion, I'm talking of the quarantine of the beach. I just looked it up in that there. She has the date. They quarantined two miles of the beach from Redondo-- They quarantined the whole ten miles of the beach in the Santa Monica Bay. And they kept us under quarantine until they issued a court order for the city to get rid of the pollution.

BASIAGO: Well, that was in 1943.

VAN NORMAN: Was it '44 or what?

BASIAGO: It was in 1943 that they quarantined. Okay, describe some of the pollution problems leading up to that action. Wasn't there a legacy of pollution on the shore there? You had gone to work at the Hyperion facility in 1924 when it was being constructed. And then in 1930 you became its chief of operations. During this time wasn't there a large sewer problem at Santa Monica from the facility?

VAN NORMAN: There was a large problem in the bay to this extent, that we were dumping--what do they call them?--pathogenic organisms in there. You know, I mean E. coli, I

think, is the bacteria in your excrement, right? Fecal matter, excrement, dung, anything you want to call it. There are other words, too, that we won't speak of. Anyway, we were polluting the ocean. There was Hermosa [Beach], Manhattan [Beach], Redondo [Beach], and all those cities downstream--they all brought charges. One of the guys down there one time made me laugh in a way. He brought the chief of police from Hermosa down there and brought him in and had him talk to me. I thought, "What the hell. You thinking about taking me to jail or something?" You know, the guy is trying to impress me. He couldn't impress me because I was working under order for the city of Los Angeles. He, in desperation, why, he thought bringing the chief of police down there would solve the problem. But yeah, we were dumping bacterial pathogenic organisms into the ocean, and they wanted it to stop. So that led to complete chlorination of the sewage water. I think they built the chlorination plant in 1948 before it was turned over to the big plant.

BASIAGO: Well, let's talk about how well the sewage was being treated during various phases. The plant was built in 1924. What was done to the sewage that entered it? Was it just transported by a pipe out to the ocean and that was it? Was there any kind of treatment right when the plant was built?

VAN NORMAN: Yeah, that's right. There was no other treatment, then, other than the small amount of lumps that we took out of there by our screens.

BASIAGO: By screening.

VAN NORMAN: The screens had a 1/16-by-2-inch slot in them. And the water comes through this screen, takes out a lot of the lumps, let's say. That's using a more or less--

BASIAGO: Another euphemism?

VAN NORMAN: Whoa! Okay. Okay. It took out what they call the screenings, and it was roughage and that's all. And anything that would go through a 1/16-inch slot would go on out.

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BASIAGO: So when the plant was built in '24, all that was really done was some simple screening of the sewage. What was the next major innovation in treating it? Did you have to wait twenty years until the pollution problem was very bad to chlorinate it, or were there intermediary improvements during the thirties when you were the chief of operations there? What were some of the improvements you were working on in the thirties?

VAN NORMAN: You're asking me what contribution, other than the screening, did we do? We put a temporary chlorination plant right down at Playa Del Rey on that street that runs through there and introduced chlorine into the raw sewage before it got to Hyperion. I don't know what year that was, but that was sometime between, well, you'd have to go from 1924 to 1950. Some time in that interim there, why, we-- Oh, wait a minute. I'll go from 1924 to 1948, because in 1948 a chlorination plant per se was built, and the sewage was chlorinated at Hyperion from 1948 on. But there was no, other than that-- Now, I can't tell you what year, because that was handled by the sewer maintenance division. I recall an incident when a horse went up there and got a noseful, and the guide was from a stable down at Playa Del Rey, and hell, that horse turned around and, man,

he went back to the stable with the guide saying, "Whoa, giddap, stop," and everything. He just went straight home. The minute he got his snoot full of that chlorine, why, he took off like a jackrabbit on fire. They had great trouble putting that in there, because if you put chlorine in anything steel, a steel pipe, hell, it will eat up that pipe in fifteen minutes. It will dissolve it.

BASIAGO: Well, that's a long time. Twenty-three years from 1925 when the first complaints about the sewage--

VAN NORMAN: Well, there is this. The only thing that they did, they enlarged the screening plant--the original screening plant. They had a north-- A south first and then a north screening plant. And that record proves a point that-- You said that you have those venturi things here. By the size of the throat and the venturi meter, I know whether it was an 84-inch or a 54-inch. And that alludes to an 84-inch, on the tapes that you have.

BASIAGO: You're speaking of the calibration records for the venturi throat.

VAN NORMAN: Yes, that's right, yeah, yeah. How many million gallons per minute or--

BASIAGO: It was an 84-inch throat.

VAN NORMAN: That's the big one. So that means that it was going through the ocean outfall--the new one they built. The first sewage that we ran out of there went on a wooden

pier out for one thousand feet, or whatever it was. So that was-- Go ahead.

BASIAGO: That was prior to 1924 you had a 54-inch throat going off of a wooden pier?

VAN NORMAN: No, no, we had no throat, no nothing. Just raw sewage was going through. Until 1924 there wasn't a damn thing to stop the sewage or any treatment given. They just ran raw sewage out on that wooden pier out six hundred feet, or whatever it was, into the ocean.

BASIAGO: It was just on a gangplank. There was no pipe?

VAN NORMAN: Oh, yes. It was a five-foot wooden pipe made just like a barrel, only straight strips. The reason I know this, a guy came down from Oregon representing the wood industry, and he wanted a piece of that pipe. He got permission from the city of Los Angeles to go up to the top and saw out a little piece. And they wanted to show how long a piece of wood would stand sewage infiltration. It had been in there so many years, and they wanted that to show. That was a wooden pipe, and the sewage came from Los Angeles through the central outfall sewer when I went there. There was no north outfall sewer. It was in construction and was finished by the end of '24 and '25. We built the second screening plant, and that was much larger.

BASIAGO: All right, the calibrations are--

VAN NORMAN: The same.

BASIAGO: For the 84-inch pipe, or from 1926, two years after you were hired, fifty years ago.

VAN NORMAN: Yeah. I think it was-- I think in 1925 they built the north plant and put it into operation.

BASIAGO: Right. But I'm saying the records are from a year after that.

VAN NORMAN: Oh yes, yes that's right. That's right.

BASIAGO: So, okay. So it's 1925 and you have this 84-inch outfall.

VAN NORMAN: Yeah, you're right. That's right. I know what you mean, yeah.

BASIAGO: Apparently the sheriff's been up there to ask you what you can do about the pollution problem. Were you being pressured a lot? Was there a lot of public controversy that was coming to your office?

VAN NORMAN: Oh, yeah. The city of El Segundo used to call me up and--

BASIAGO: During the thirties, I mean, when you were director.

VAN NORMAN: Yeah, I got complaints. Well, most of your complaints from El Segundo were over odor. We had no odor control there. Later on when we put in aeration and everything, why, they bought perfume by the barrel. Yeah, big barrels of that stuff, we put that in there to deaden

the odor.

BASIAGO: So when did the aeration come about?

VAN NORMAN: Nineteen fifty. Well, aeration didn't come about until-- We started out in 1950 with a new plant that's still there, the same plant. It was installed in 1950 and it wasn't complete. We had the primary settling and so forth and so on. Sludge was taken out in the primary. Then we went to the secondary settling--that's the second settling. And then after a while they put in these aeration tubes. The reason that they aerate sewage is because oxygen promotes the rapid growth of the bacteria that passes small particles of fecal matter through the digestive system, thereby changing the gravity of the fecal matter and it sinks to the bottom. That's why they put all this air in there, because it's a bacteriological action that takes place. And the bacteria, they have what-- They call them flocculative. What's the other kind? Anyway, I'm getting out of my line of profession. It's a chemist or--? What am I trying to say?

BASIAGO: Biologist?

VAN NORMAN: A guy trained for that particular work, a sanitary engineer. They call it plain subsidence, if you want to put it in my understandable language. That's what it is. It just changes the specific gravity-- See, a guy told me one time they took a jar of water from the Colorado

River that had sediment in it. And they put it up in the jar for five years, and the damned stuff was still in suspension five years later. So something has to speed up the downward flight of all of those small particles in there. By the way, the good book on sewage practice tells me that there's about 1,000 parts per million of contamination in sewage water. All right, I'll run this through. This is a favorite one to me. Although it consists of a different thing--I'm drawing a parallel here--but Ivory soap was 99 and 44/100 pure. Take [away] that extra 99 and 44/100 and take the other, that will be 56 parts per million. That amounts to more than 1,000 parts per million. There's more foreign matter in a bar of Ivory soap than there is in sewage water. Now, that isn't fecal matter or anything like that. It isn't pathogenic organisms. You can run that out and see what-- In other words, I think that gives you 4,600 parts per million.

BASIAGO: Well, 56 per 100 would be about half of a percentage point, or 1 part per 200 parts in Ivory soap is impure. So that would be 5.5 per 1,000, correct?

VAN NORMAN: Yeah.

BASIAGO: And what was the-- What were the figures you gave on sewage?

VAN NORMAN: Sewage is 1,000 parts per million of contamination. And Ivory soap has got more than that, I

think, in the remaining--

BASIAGO: So that would be 1 part per 1,000 in the sewage, or it's five times less impure than Ivory soap.

VAN NORMAN: Yeah.

BASIAGO: The difference being, of course, that the sewage contains pathogenic organisms.

VAN NORMAN: Yeah, that's right. One is the pathogens, and the other one is harmless ingredients. But when a guy tells you, hell, that Ivory soap was 99 and 44/100 percent pure, then you say right away, "Hell, that's nothing." It is nothing until it's compared to that. But the one is dynamite and the other one is milk.

BASIAGO: So let's trace the improvements in the plant as L.A.'s population is booming.

VAN NORMAN: Improvements in the plant?

BASIAGO: Were there any during your tenure as chief of the facility that you were working on?

VAN NORMAN: There were no improvements in the plant. No. You're asking me-- Just a second. From 1924 till 1950, we're talking about.

BASIAGO: Yeah, that's a long time.

VAN NORMAN: That's correct. Now, what improvements were made? All we did was beef up our capacity to screen sewage. It was getting to the point that we couldn't handle it. So they beefed up the plant and they built five

fourteen-foot-diameter drums by twelve feet in length and installed them in 1925 or '-6, in there. Then they went on and later on in about 1930--this figure I'm just picking out--about five or six years later, there was room in the building to put in numbers six, seven, eight, nine, and ten. So they doubled that. They made it from five to ten--what did I say?--fourteen feet in diameter by twelve feet in length screens. These other ones were eight feet by eight feet. They were small--the ones in the first plant we started up on the hill. There were eight of those units.

BASIAGO: So they put in larger screens.

VAN NORMAN: Larger screens with a greater gallons per second going through them, yeah. By the way, they were hell to keep clean. We finally ended up by taking a steam nozzle and put it on there. I had a guy that did nothing but clean screens everyday, because your grease deposits on there would cling to the plates and finally plug up. Then they'd go sour and they wouldn't do a damn thing. They'd just all get fuzzed up, and we had to take them out of service and put a new one in, or a clean one in.

BASIAGO: One thing that I find striking while comparing the history of the Department of Water and Power to the sewage plant at Hyperion, or actually the Hyperion plant, is the fact that the L.A. Department of Water and Power has

never suffered the defeat of a bond issue to fund any of its improvements. However, taking as an example 1931, when in June the city defeated a $6 million bond issue intended for the improvement of the sewage system--

VAN NORMAN: Yes, that's right.

BASIAGO: About $270,000 of which--

VAN NORMAN: What year was that?

BASIAGO: Nineteen thirty-one. About $270,000 of which were for degreasing works at Hyperion. Were you frustrated that you weren't getting the funding you needed? By then you were the director of the plant.

VAN NORMAN: Yes, I think you're right. I know you're right. I'm aware of the fact that they have never been turned down before on a bond issue, and that was the first defeat they ever suffered. Now, how much was the bond issue?

BASIAGO: The bond issue was for $6 million.

VAN NORMAN: To what?

BASIAGO: Most of which was for sewage relief, or in other words, the upgrading of the sewage treatment.

VAN NORMAN: I don't--

BASIAGO: Well, no, it was for relief sewers, meaning more sewers for the city. But a quarter of a million dollars was to go for degreasing works at Hyperion.

VAN NORMAN: For what kind of work?

BASIAGO: Degreasing works.

VAN NORMAN: Oh.

BASIAGO: I'm just wondering if by then you were director of the facility?

VAN NORMAN: What year was that?

BASIAGO: Nineteen thirty-one.

VAN NORMAN: Yeah, that's before degreasing. I don't know just what they're alluding to there. What method did they have of taking the grease out? See, that's a hell of a big problem down there now. They collect grease down there till hell won't have it. I've seen it hanging on the walls there in the aeration tanks down there where it's distilled. What raised hell with the sewage treatment after it got going was nothing but your soap detergents. Brother, you should have been there. You've been to the Hyperion plant?

BASIAGO: Yeah.

VAN NORMAN: You know, down where the aeration is, what's going on-- That's down past the-- I haven't been in there for so long. The place is torn up so damn bad now, I go in there and get lost. But anyway, there is the head works building, which I was in charge of. I was in charge of that and the primary settling tanks and the secondary treatment, and the final settling. A lot of your grease goes down there. And when the detergent hit the world, all

of a sudden it was just like a volcanic explosion. We had suds that were going over the top of an eight-foot fence. They didn't know how the hell to get rid of them. Man, we put three men out there with water hoses and cold water. That's the only way you could knock suds down is to hit them with cold water. Then it will congeal and settle out. Then they put in an aeration system that took care of that by constantly aerating this water while they changed the whole thing. They don't have any suds down there anymore. There might be a little up there around there, but they put in aeration tubes down there.

BASIAGO: Let's talk about your day-to-day work life as director of the facility in the thirties. What was your average day like?

VAN NORMAN: Until 1950, I operated the dragline, for one thing, and moved the pipe up there, in addition to being chief operator. It was too damn high-sounding, so they changed it to-- I ended up as a senior sewage plant operator. You'd think that you were the head of something if you were the chief operator of whatever the endeavor is-- why, you're a big gun. The senior operator is just one of many. I was timekeeper and had to assign vacations. In other words, I ran the office.

BASIAGO: You were in the front office.

VAN NORMAN: Yeah.

BASIAGO: Okay, so you were--

VAN NORMAN: I'll tell you a joke just for a second. During the war, North American Aviation Company came over and, believe it or not, my friend, they shot off 155-millimeter shells right down there in the sand hills at Hyperion. And one day, I had a little office--I tell you, this is a degrading statement--he didn't know I was standing there. So he wants to call Washington, D.C., or some other place back East about their work, the air force. He wanted to call for instructions or something, so he says to this guy, "Go into that shack over there." And he turns around and he says, "Go into the main office of the Hyperion Treatment Plant and use the phone and call this number." The minute that he saw me, why, my office was changed from "a shack" to "the head office of the facility."

BASIAGO: So were you living on the plant there? I know that William Mulholland, when he was a **zanjero**, or keeper of a **zanja**, when L.A. still had open-trench sewage--

VAN NORMAN: I know what. They were "zanquis." [laughter]

BASIAGO: Right. He lived in a small shack near Pico Boulevard where the Mulholland fountains are now.

VAN NORMAN: I lived right near there, at Los Feliz [Boulevard] at the end of the street there.

BASIAGO: Right, right.

VAN NORMAN: Yeah, I lived there and managed an apartment there after I retired, right down a block from that. Some joker went down there one night and put two or three packages of detergent, and then you can imagine what happened.

BASIAGO: So were you also provided a facility there at Hyperion?

VAN NORMAN: I was for ten years. From 1930 to the year 1940, I occupied a small two-bedroom house. It was built on the facility for an old Irishman that was a watchman there. He was around the clock. And they built-- H. A. Van Norman had this little house built for the watchman, old McCormick. And old McCormick had a stroke one day and told me he didn't feel good, and that was the end of his career. And after that when he took it out, then I was asked if I would like to live there on the property, and the Board of Public Works took action and voted me free rent for a house there for ten years.

BASIAGO: Did you enjoy that or did you consider that kind of a sentence? Sounds like a good deal.

VAN NORMAN: I was immune from the stink or anything like that. If you know where Hyperion is located, that was all sand hills there. This little house was off of a construction road that came in from Grand Avenue, which goes over the hill from El Segundo [Boulevard], and you

turned and went in and that was the end of the line. Van Norman had a concrete road built in there--construction road--and for years there was no road between Hyperion Treatment Plant and Playa Del Rey. That was all just sand hills there. Later on, they built Vista Del Mar. Oh, Vista Del Mar was built after I left there. So, yes, I lived on the property and occupied a house. By the way, just off the record--if you want to call it, I don't give a damn if you put it in--but this house-- I built a room on there at my expense, a fourteen-by-twenty-one-foot room, because the house was so small it had no dining room. I built this on there, and they permitted me to build it on there. And the funny part of it was--it made me laugh with my back turned--was the fact that before they gave me permission to attach a room to this little old house, it had to go before, we'll say, the environmental board [Los Angeles City Department of Building and Safety] to be approved whether it would be proper in construction and appearance. Before I was given permission to have it constructed, it had to pass city regulations. So I paid a friend of mine that was a city guy, I paid him to build a house for me. I lived there ten years.

BASIAGO: So you're telling me you had to have an environmental impact report for your--

VAN NORMAN: Oh, yeah, that's right. This was a forerunner

of that, let's say. You know what I mean? You had to get the approval of the arts commissioner--I don't know what the hell they call it. I lived on the property from 1930 through 1940. At that time, at my own selection, I decided it was time to move out. It's good that I did because a little later on-- Well, it would have been another ten years to 1950 or earlier when they started moving the sand out of there. I don't know exactly what year they moved that sand. They moved 41 million yards there by hydraulic-- With the high-pressure hoses and putting it in through a sluice box, running it down to these big sand pumps down there that pumped it all the way to Venice. They broadened the beach by a couple of hundred yards there.

BASIAGO: Some time early on after the Hyperion facility was constructed, there was some kind of trial there.

VAN NORMAN: Some kind of what?

BASIAGO: Some kind of hearing involving the fate of some civil employees. There was a dispute that--

VAN NORMAN: Oh, now you're talking about the war between the city engineer and the mayor.

BASIAGO: That sounds like an important story to me because it would cast some light on the power of the city engineer's office versus the mayor's office.

VAN NORMAN: Who was the mayor then, do you know? Shaw?

BASIAGO: I believe it was Frank Shaw.

VAN NORMAN: I'm not positive about that. You asked me a question, and I can tell you this much about that. They held hearings down at Hyperion, and a radio station had the rights to broadcast it. The narrator was Bill Welch. You know the guy that-- Okay. Bill Welch was there. And I talked to Bill Welch personally. That's neither here nor there, but I was at leisure to walk around and even permitted to go in and listen to the hearings that they were holding out there.

BASIAGO: He now broadcasts the [Pasadena] Rose Parade every year?

VAN NORMAN: Every year. He has forever, yeah. Bill Welch, hell of a nice fellow.

BASIAGO: So what was that issue? What was this hearing about?

VAN NORMAN: I think the mayor was trying to replace [Lloyd] Aldrich. That's the engineer's name, wasn't it?

BASIAGO: Yeah. Yeah, the city engineer was Aldrich. So why did they hold it at the plant? Were they kind of trying him on his own turf there? I don't understand why they would hold it at the Hyperion facility.

VAN NORMAN: I can tell you a little episode that is relevant in a, not in an important way, but this city mayor had a sharpshooter named Fred Vehie. He was an inspector. And he came down to Hyperion-- Now, this is all

just off the cuff. I got it from a guy I was talking to. He came down there to Hyperion and he went up into a light socket where you screw the thing in there and there are little bulbs in there. And he condemned the installation of those in the service building, because instead of being twenty-two threads to the inch they were eighteen or something like that. Fred Vehie, he was a sharpshooter for the mayor trying to get-- What they wanted to do was replace Aldrich.

BASIAGO: Well, Fred Vehie's name has come up before. Wasn't he the Shaw administration--?

VAN NORMAN: He was an electrical engineer.

BASIAGO: The Shaw administration was corrupt. They were--

VAN NORMAN: Selling jobs.

BASIAGO: --selling jobs.

VAN NORMAN: Yeah. Police jobs. I have a nephew, he's still alive, retired in the fire department, and a guy came up to him and says, "You're tenth in the line. For a thousand bucks I can move you up to number one."

BASIAGO: Now, this incident that you mentioned with the light fixture, was this kind of a protection racket they were running with the inspecting official?

VAN NORMAN: No, I think that was the inefficiency of Aldrich's installation, or the people and the inspectors and whoever he had under him.

BASIAGO: So Vehie was doing a good job of inspecting him?

VAN NORMAN: Well, he was just sent down there to find fault.

BASIAGO: Okay. So, when you call him a sharpshooter, you're using that as--

VAN NORMAN: Well, that's what he was. He was out after your hide. The reason I call him a sharpshooter, he was carrying out the wishes of the mayor and building up a case against Aldrich to oust him.

BASIAGO: In a political power struggle?

VAN NORMAN: Yes, I think so. I believe that was the basis of it. In other words, he was going to chop him down to anonymity. He had a brother, Joe [Joseph E.] Shaw. Through the grapevine I heard that he did a lot of the footwork for his brother.

BASIAGO: So when Fred Vehie went up and pointed out that that fixture was threaded with only eighteen--

VAN NORMAN: Yeah, whatever it was. In other words--

BASIAGO: He was just being picky.

VAN NORMAN: Oh, yeah. Any damn thing that he could come up with, I would suppose, would be evidence that would further the cause of a change.

BASIAGO: Do you think they held the hearings at Hyperion to kind of intimidate the city engineer? Kind of bring him down a peg? Seems like that would be appropriate for city

hall, not for the Hyperion part.

VAN NORMAN: That's correct. They held part of them in the city hall, but then they moved down to Hyperion. And by the way--

BASIAGO: Do you remember hearing anything about why they moved it? What was it doing at the sewage plant rather than at the city hall?

VAN NORMAN: I can't offer any explanation for that. I don't know. Aldrich had a smart guy, and I can't think of his name now. He came down there and he was a heckler. He sat in the meetings, and he would put his two bits worth and upset the serenity of the proceedings. And they couldn't throw him out. He was a persistent little so-and-so, as the story goes, I heard one time.

BASIAGO: What kind of things was he saying?

VAN NORMAN: Oh, he was countering the charges that they made.

BASIAGO: Was he getting a lot of laughter?

VAN NORMAN: Oh, they had a hell of a time over that. And I think they tried their best to bar him, but they couldn't make it stick because he continually returned. By the way, Fred Vehie was a smart dude in his profession. He invented something that the United States government electrically, whether it be for warfare or what I don't know-- But he got $600,000 tax free from the federal government for his

invention. And I recall it because at his death, he went out here on the desert--he was a rock hound--and he dehydrated and died. He went out on the desert, ran out of water, and shriveled up and shrunk away, whatever you want to call it. He had sixty $10,000 deposits. Like we have now, you have a certificate of deposit and it's guaranteed up to $100,000. That was $10,000. He had **sixty** of them when he died.

BASIAGO: Do you think that was because he had been through the bank crisis in the early thirties?

VAN NORMAN: I'd say so. I have the same discussions now. I get a little bit cagey about investing money, and say that I wasn't going to exceed the limit. Well, what the hell, why are you hollering about that? I said, "Hold it. I'm prior to 1929. I saw the joint go bust, flat on its face. And don't stand there and tell me it can't happen, because I tell you it did happen. And I witnessed it, and I'm not going to--" Well, you read it in the paper every day. There's a lot of banks going bust right now. A lot of people have got over $100,000 in it. They get their $100,000, but they only get a portion of their excess back. Now, why the hell do you want to go out here and, if you've got it, put a half a million or whatever it is into a place and then get about 80 percent back or something like that if the joint goes bankrupt?

BASIAGO: You're mentioning the Depression. What were you going to say?

VAN NORMAN: Oh, the only thing about the Depression that affected me was-- I had a steady job, but I suffered two 10 percent cuts, which I'm not squawking about, I just merely mention it. Even in civil service, we took two 10 percent cuts in our wages for a certain length of time. I don't know how long it lasted. And our sewage plant pay was pitiful. The money that I got--and all of us got in those days--was peanuts compared to what it is today. Well, of course, that's in every case. It's a ten-to-one multiple, whatever it is, you know what I mean, everything you talk about. You used to be able to buy a loaf of bread for eighteen or twenty cents. Now it's $1.45 for a one-pound loaf of bread.

BASIAGO: How did the Depression and some of the work projects that FDR [Franklin D. Roosevelt] started affect the facility?

VAN NORMAN: Oh, they put-- It's in my notes here. I'm guessing wildly now, but they put at least one thousand men down at Hyperion moving sand with shovels. And they threw it into a sluice box, and it was washed down on the beach. That was an attempt to get the place ready for future building. I remember on Franklin Delano Roosevelt's death, a surveyor, a good friend of mine--I can't remember

his name right now, but he was in the surveyor department--he hollered over to me and said, "The president just died." Why is that important to me? Because he was surveying the cubic yards of the hills around there that had to be moved preparatory to letting a bid out to move 41 million cubic yards of sand. How did they know that it was 41 million? Because they blocked it so many feet and took the height and just multiplied it into 41 million yards, and that's what the contract was for. I don't even know the name of that outfit that moved that sand. But they moved 41 million cubic yards of sand and spread it from the south boundary of Los Angeles city limits down at Grand Avenue and El Segundo. It starts there and goes clear on up to Santa Monica [Boulevard].

BASIAGO: Yeah, my records show that that movement of sand started in 1935. A source reads a huge WPA [Works Progress Administration] project was set up to remove the sand dunes at Hyperion.

VAN NORMAN: In what year?

BASIAGO: Nineteen thirty-five.

VAN NORMAN: Okay. That sounds about right.

BASIAGO: In preparation for the construction of treatment works.

VAN NORMAN: That's right.

BASIAGO: Do you think this was basically a make-work

situation?

VAN NORMAN: Put people to work. One thousand guys or two thousand, it could have been two thousand. The hill was swarming like ants there. And they put sluice boxes up there and had a pump down there, pumping salt water up there to circle it and run down these ditches. And these guys were along the side of the ditch with their shovels.

BASIAGO: Could they have done it with larger shovels? I mean, could they--?

VAN NORMAN: The object was to put men to work. They didn't want to move it with anything bigger. They could have moved it with a clamshell. One clamshell or one dragline could have done the work of a hundred men or one thousand men. I don't know what the equation is, but you could shovel more damn sand with a clamshell or with a dragline bucket. These guys used to get tired, and somebody would go get a big piece of cement and throw it in the ditch and flood it, let it overrun the ditch. And they would have to all sit down until the crew came over and shoveled the accumulated sand that stopped behind the rock so they could go on again. And that's the way they took a blow.

BASIAGO: What, they got so tired of the monotony of shoveling sand?

VAN NORMAN: Well, yeah. They only got about, what,

thirty-five a month or something like that. They worked so many hours for thirty-five bucks, or whatever it was, and that's all they got that month, as I understand. The PE [Pacific Electric] railway was-- The red cars to Redondo were still running along the beach there, and they came down from Los Angeles, big trainloads of them. They built a stairway out there--I think it was one hundred feet long--so they could all get off the car at the same time, unload, and walk up from the railroad tracks (which was a lower elevation) up to the ground level, up to where they went to work.

BASIAGO: Those two items were basically the main things that occurred at the plant during the thirties: the attempt to provide funding to improve the degreasing operation, and the make-work situation there via the WPA for the sand removal.

TAPE NUMBER: II, SIDE ONE

MARCH 10, 1986

VAN NORMAN: You are amazed that nothing took place in that long period of time.

BASIAGO: Yeah, between 1924 and 1943.

VAN NORMAN: Yeah, I am too.

BASIAGO: Were you trying to pressure anyone? City hall, or elsewhere, to upgrade the facility?

VAN NORMAN: No, that was beyond my capacity, let's say, to apply any-- All I could do is remind them of the inefficiency. With the amount of water that we were handling we weren't removing the amount of solids that we should be. See, the faster that you ran that water through there, in corroded little screens, cut down the efficiency of the removal percentage.

BASIAGO: Why is that?

VAN NORMAN: Well, because it would be going through there faster under more pressure and it will probably push through more stuff. I know a private engineer asked me for some information through Bill [William F.] Garber one time. I can't think of his name now, Dr. somebody. Bill knows his name. He called me and asked me what the loss of head was. Well, the loss of head-- You got water coming in like this and then it went over, filled up and started flowing. You maintain about a fourteen-inch drop there, in

other words, like down a waterfall or something. Well, as you piled that water up higher in the screens, that became less efficient. It speeded up the water going through there and probably dragged through more screenings than it would with less water.

BASIAGO: Not all the time between 1924 and 1943 was wasted in terms of upgrading the plant. In fact, by November '39, a board of consulting engineers estimated that almost 1.6 million people were tributary to the Hyperion [Treatment Plant] outfall, and they were recommending that facility be upgraded because of the amount of contamination along the shoreline.

VAN NORMAN: What year was this?

BASIAGO: Nineteen thirty-nine.

VAN NORMAN: And a commission of engineers? Does it name any of them?

BASIAGO: No, it just says a board of consulting engineers--

VAN NORMAN: Yeah.

BASIAGO: --were concerned that since 1.6 million people were tributary to the Hyperion outfall that a series of improvements should be made to make it more hygienically safe, because the beach was considered an inestimable value, in their words, as a recreational facility. They recommended the following things: construction of grit and

grease removal works; flocculation, sedimentation, disinfection, sludge digestion, and dewatering works. In an investigation of the facility, excuse me, of the feasibility of repair of the existing submarine outfall, did you have a lot of problems between 1924 and 1939--that's a fifteen-year period--with the outfall itself? I mean, weren't there a lot of leaks?

VAN NORMAN: Well, I do know one thing, the outfall at the end had a Y. It became a single line and then it Y'd off. One of those Y's plugged up with sand. I don't know if they ever did get that clear or not. They hired divers to go out there and work on the line. There's another thing that enters into it--and I don't know the years--out in the [San Fernando] Valley. Do you know anything about the treatment plants in the Valley?

BASIAGO: No, not too much.

VAN NORMAN: Well, we have sewage treatment plants that were built sometime in the interim now. I think they could have been built before 1950. They have a treatment plant out there. I think what they do there, I believe they treat and go back into the outfall sewer with their effluent. They don't dump it in the river because that would be going right back to the same thing; you would have a contaminated L.A. River all the time. I never did go visit that plant out there. But there's a treatment plant

in the Valley; it's in Burbank or around in there someplace. You see, they built-- To reduce the sewage roughly: It about triples. From low flow to high flow at Hyperion, there's about a direction of two-thirds; here, they're up to a full three-thirds. So they call that the peak flow. And at Culver City, now you're going through the same damn thing right now. They're having trouble. They're dumping raw sewage into Ballona Creek, and it's going into the marina, right, and causing a problem. In other words, we're right back where we were forty years ago.

I've got a-- What they call HERS, Hyperion Energy Recovery System. It's a report from an engineering outfit. This place is supposed to be done this year--the improvement of Hyperion. And it's a Japanese patent or something--they bought it. Joe Nagano told me about it. You know Joe Nagano or not? Well, he was a chemist and he finally got up to be-- Anyway, he was the head of the chemists at Hyperion for a long time. He's a nisei, a pretty smart boy, and he worked under Bill Garber. And this is supposed to be ready to go in operation. Now, they say it will be in 1990 or '-2 or '-3 or something before Hyperion is up to tall again. We're slopping water over, to use just an ordinary phrase. We're running excess sewage that is getting loose and contaminating the surf and

the harbor down at the marina. What happened to this big book that says it will be ready here in 1986, at the end of 1986 will be completed? And they spent $3.5, $4, or $5 million dollars; the federal government tossed in $200 or $300 million dollars into it. I don't understand it. What's happened? They've spent all this dough to bring a thing up to satisfaction, and now all of a sudden, why, there's dynamite and it won't-- With the improvements that have to be made and everything, why, it will be another five or six years before it's completed.

BASIAGO: I hadn't read anything about a Japanese firm involved. What was that, in the consulting phase of the operation?

VAN NORMAN: No, it was a method.

BASIAGO: It was a method that they purchased from the Japanese?

VAN NORMAN: Well, Bill Garber can tell you all about it.

BASIAGO: It wasn't the Japanese-American community. You're talking about Japan.

VAN NORMAN: No, I am talking about a right to use a sewage-disposal method that the Japanese perfected. And that's what they're building at Hyperion now. Well, I'm going to have to be careful. I shouldn't criticize those people about it, but the fact comes out to me that recently they have had a, more or less, complete turnover of the

hierarchy in Hyperion. They removed O'Hara, who was the head man there, and there are several other changes they've made--they've installed a whole new crew down there.

BASIAGO: This was how recently?

VAN NORMAN: Oh, within the last three or four months. I called the guy the other day. I said, "I understand you've had a complete turnover in the command." And they said, "Yes."

BASIAGO: You mentioned this is history repeating itself. You had these problems with sewage pollution.

VAN NORMAN: We're experiencing the same thing right now that we experienced forty years ago. In other words, we're right back starting over at square one again. You have more sewage than you can successfully treat.

BASIAGO: Bill Garber mentioned that there are three options to how we treat sewage, and he's still in favor of pouring it out into the ocean. He says that the amount of sewage now going into the ocean represents .4 pounds per capita per day in the L.A. basin. That's for each individual living in the L.A. basin.

VAN NORMAN: Wait a minute now. Let me go over that quickly. There were four pounds of what? Contamination?

BASIAGO: Four-tenths of a pound of contamination.

VAN NORMAN: Four-tenths of a pound of contamination?

BASIAGO: Per capita.

VAN NORMAN: Per person, yeah.

BASIAGO: Per day. Per person, per day.

VAN NORMAN: Yeah.

BASIAGO: He says that's what we get in terms of environmental pollution by the sewage outfall. He says, however, when you burn it on land you're talking about a ten-- When you burn it in various processes on the land, it results in five to ten pounds per person per day pollution of the air, and fifteen pounds per person per day if you just create a landfill with it. Were any of these alternative methods discussed back when you were director of the facility?

VAN NORMAN: No, that really would be out of my scope.

BASIAGO: I thought some characters might have come along when you had all this beach pollution in the thirties and said, "Hey, partner, I can tell you what to do with that stuff." Weren't there various entrepreneurs and scientists coming along with ways to treat it more efficiently?

VAN NORMAN: Well, here I am a nonprofessional person making a comment about a situation. But sewage to me--I mean judging it as a nonprofessional person--ran into a roadblock, and they haven't found a solution. You now have a sludge line running seven miles out into a canyon in the Santa Monica Bay, right? All right, and you're pumping so much sludge out there, digested sludge out there every day.

BASIAGO: Right. One-quarter of which has received secondary treatment, three-quarters of which has received only primary treatment.

VAN NORMAN: This is sludge you're talking about now?

BASIAGO: Right. The capacity for secondary treatment was 100 million gallons per day. The amount of sewage now going through Hyperion is 400 million gallons per day. Thus three-quarters of all the 400 million gallons--

VAN NORMAN: Yeah. In other words, you're dumping a lot of suspended solids into the ocean. Well, sewage disposal, to me, took a step backwards. They put the crap back in the ocean again. They didn't keep it out of the ocean. All they did up there is change it. Instead of running a mile- or mile-and-a-half-long pipeline, well, they put it seven miles out there, and took all of the stuff that they retrieve out of that and purify it, then they put it back out into the ocean again. And evidently, these people that operate the environmental authority [Environmental Protection Agency] are telling them to clean up the mess, take that contamination out of the ocean. And what do we offer them? [tape recorder off]

BASIAGO: What were you going to say?

VAN NORMAN: I'm not going to say it. I'm not going to quote anybody but--

BASIAGO: Can you paraphrase without giving names?

VAN NORMAN: Let me think a second what I'm trying to get out. No, it's just beyond my scope. I shouldn't comment on it. It's up to the sanitary engineers and specialists to solve the problem. I'll say this, that I understand that this Japanese system that they're installing at Hyperion right now--that is, as I understand it, to be completed about this year--called for burning of the sludge. Okay? Even the engineers that were educated there spoke about the particulate matter in the air. I think they were all--

BASIAGO: Particulate?

VAN NORMAN: Particulate matter, yeah, particulate matter in the air. In other words, part for a million of contamination, or whatever you call it, in the air now. People were hollering about that. What's going to happen when they start burning that again? Evidently they have the clearance of the powers that be at the Environmental--

BASIAGO: Protection Agency?

VAN NORMAN: Yeah. They had to approve this, I assume.

BASIAGO: Well, let's consider what you just said again. I've pulled out the figures that Bill Garber gave me. Bill, of course, is the former director.

VAN NORMAN: That's correct, yeah. He's an authority.

BASIAGO: He's an authority. He mentioned that, in terms of pollution in the L.A. basin, if you dispose of the

sewage by water means, which is flushing it out to the sea, that's going to result in .4 pounds of sewage per person per day. I guess he's arguing there's a very efficient filtering and dispersion of the sewage out to sea.

VAN NORMAN: Yeah, okay.

BASIAGO: It is, after all, seven miles out there. He says, however, if you burn it, that results in twenty times more pollution per person per day--5 pounds, much of that carbon dioxide which will be trapped by our natural inversion layer here, and we'll have a hotter--

VAN NORMAN: In other words, you're telling me that you're going to contaminate the air around here by so many parts per million, or so many pounds per person per day, when you put this particulate matter back into the air again.

BASIAGO: Right. And the landfill alternative, the third alternative, he claims results in 10 to 15 pounds per person per day. So what you just told me is that the Japanese method, which relies on some kind of burning of the remnants of the activated sludge process-- Is that what we were talking about?

VAN NORMAN: Yeah, yeah, that's right.

BASIAGO: As they used to, it's going to produce a lot of carbon dioxide apparently in the basin.

VAN NORMAN: Can you cut this amount?

TAPE NUMBER: II, SIDE TWO

MARCH 17, 1986

BASIAGO: Back in 1924 when the Hyperion Treatment Plant was built--

VAN NORMAN: Yeah, when I was first employed at Hyperion in 1924, the sewage at that time was being disposed of through a wooden pipeline on a pier and dumped into the ocean, I think about one thousand feet offshore--no treatment whatsoever, just raw sewage. In 1924 when I arrived on the scene in June, why, the building was built, and then I went to work there assisting Mr. Alexander and Mr. Ashley, who were hired to oversee the installation of the screens. There were eight eight-foot screens installed for fine screening. And that plant started up operation after proper installation of the machinery and everything, and I went to work in there as a plant operator. A little later on when it became necessary to dispose of the sludge or the screenings, which we buried in the adjacent sand hills, why, I operated a dragline clamshell bucket to dig excavations in the adjoining hills. We put the screenings that were screened out and removed from the sewage and blew them by compressed air up to the burying grounds. They were covered by five to ten feet of sand in the excavation that I dug with the clamshell bucket. Now, in about 1925, it became necessary to enlarge the screening capacity, and

they built a north screen. The plant that originally had the eight screens in them was termed the south screening plant, and directly north of it about two hundred yards they built this north screening plant, where they installed five screens that were fourteen feet in diameter and twelve feet in length. Later on, about a year or so later, they installed another five, making ten in all. The screening plant lasted from 19-- Say '26 until 1950, when the new system of complete treatment of the sewage--aeration or primary settling and secondary settling and final settlings--was installed.

BASIAGO: I've noticed in the historical record that the Hyperion Treatment Plant site was selected for three things: its favorable terrain, its distance from population centers, and its nearness to the Centinela Valley. This valley supported numerous farms and therefore could use the collected sewage for irrigation purposes. Can you recall any of the fertilizer operations that were going on right near the plant? Were there farms in that area that were dependent upon the--?

VAN NORMAN: We're talking before 1950. There was a fertilizer contractor, Kellogg fertilizer [Kellogg Supply, Inc.]. I think he's still in business, his son is. Clay Kellogg was his name. They used to haul the screenings, and he would process it and sack it and sold it as

"nitrohumus"-- that was the name that he used.

BASIAGO: Nitrohumus?

VAN NORMAN: Nitrohumus was the name of it. Until they built the incinerator in 1933, I guess, and they burned it. And then, of course, when the new plant was completed in 1950, well, the incinerator was torn down and the sedimentation system was installed. Clay Kellogg trucked away all of the screenings that we retrieved from the sewage after it was dried. The citrus growers were the main customers of all of these screenings that were hauled out of Hyperion. He also dug up, excavated the sand hills and hauled off the prior deposits that had been buried there and took those and processed them too.

BASIAGO: So he was competing with other commercial operations for this?

VAN NORMAN: Oh yes, yes. He was a big fertilizer dealer, and then he had, as I say-- Oh, he also took the sludge from the county plant, which is located on South Figueroa Street in Los Angeles. It outfalls at White Point off San Pedro. And he also combined that sludge and that from Hyperion together and made manufactured natural humus and sold it under the name of sewage sludge, or nitrohumus.

BASIAGO: Did you ever meet this gentleman?

VAN NORMAN: Oh, yes, I knew Clay Kellogg personally. He used to bring us a turkey over at Christmas. Yeah, he was

a fine fellow. I assume that his son is still operating the Kellogg fertilizer and still selling the sludge from the county.

BASIAGO: That's very interesting. One thing that's curious when I review the record of what the Hyperion facility has chosen to do with sludge is it's always used various methods. For instance, at this time it's pouring sludge into the ocean. It's planning perhaps to burn it and get electricity from it. In the past, you mentioned it screened it and buried it. Reviewing all these various methods, there have been numerous times when the plant changed its method of operation. Can you find any reason why it has decided to treat the sludge in a certain way during one period, and a certain way during the other? Is that related to how much sludge there is, or can you trace any other rationale for that?

VAN NORMAN: Let me reflect and see if I can draw a reasonable conclusion on that. Why did they change from these various methods of disposal.

BASIAGO: Yeah, the history has been very scattered in terms of what's been done to the sewage.

VAN NORMAN: Well, I more or less felt that we did put all of the solids that remained in the sewage in the ocean at one time. Then we turned around and went to treating it on land and disposing of it before it went into the ocean.

And then later on, I feel that they took a step backwards when they went back and built the seven-mile-long outfall at the end of that canyon off of Malibu there and started dumping it back. They were repolluting the ocean, so to speak.

BASIAGO: So you were disappointed at that time.

VAN NORMAN: That's right. It seemed to me that we'd always been told that sewage disposal was progressing towards a better solution, and I felt that putting it back in the ocean didn't-- All it did was remove the sludge. Of course the burning, the reason I suppose they brought that about was the incineration-- The air pollution was the thing that they were trying to correct at that time. And to go back to the ocean again to go through the natural process of decomposition in the ocean-- Then later on they turned around and put all of the sludge that they'd retrieved, taken it out of the sewage through the meticulous process of separating it-- Then they put it back in the ocean again.

BASIAGO: When that occurred in 1951, what alternatives do you think there were to that at the time? Was there another method they could have used rather than creating the seven-mile outfall? Excuse me, in 1957 the seven-mile outfall was built. Was there an alternative at that time in your mind?

VAN NORMAN: No, there was no alternative as far as-- They only had a choice of either disposing of it on land and contaminating the air by incineration or putting it into the ocean for natural decomposition. Well, the authority that is causing this change is the Environmental--

BASIAGO: --Protection Agency.

VAN NORMAN: Yeah. After I left there, I visited frequently and talked with the powers that be at the Hyperion, and they were ordered--the city of Los Angeles, as I understand it--was ordered to stop polluting the ocean with sludge, that it was still a menace. I don't know whether as a combination of injury to the fish life and also to humans. They reason that the bacteria contained in there could still come back to shore. Otherwise, I can't see where it would be a menace to the population. I'm not familiar, or I haven't read, what the real reason is for demanding that the city cease polluting the ocean with a seven-mile-outfall sludge line.

BASIAGO: Let's go back to the beginning of the plant. When I was asking about these farms I was wondering whether there were any local farms around the facility that would come up and utilize the sewage for fertilizer.

VAN NORMAN: Not to my knowledge.

BASIAGO: So they all had to go through Mr. Kellogg to get the fertilizer.

VAN NORMAN: Kellogg or his outlet. He always talked about it, because it was especially adapted--according to his sales pitch--and he had a ready demand for all he could get in the citrus industry. So, the only time that I remember is going way back to 1902 when I first came to Los Angeles. There were open ditches on Avalon Boulevard--which [is the name] it is now. That used to be South Park Avenue, and they turned it into Avalon. And there were **zanjas**, as they call them in Spanish I think-- It's a ditch. The sewage was running in an open ditch right down Avalon Boulevard to Chinese truck gardens out in the Gardena area. That's the only time that I recall in my lifetime that raw sewage was used for fertilizing vegetables.

BASIAGO: There's also a historical question that I want to explore that some of your memories might bear upon. I was reading a [UCLA Orah History Program] history with A. M. Rawn--

VAN NORMAN: I knew him well.

BASIAGO: He was chief sanitary engineer for the county.

VAN NORMAN: He was the sanitary engineer of the county sanitation district. Was he not?

BASIAGO: Yes, he was. Prior to the construction of the outflow, he believed that the outfall needed to be constructed because cesspools in the city--both commercial

and residential--were percolating down to the aquifers and polluting the underground water supply. Do you remember any of that problem?

VAN NORMAN: No, I do not. I don't remember exactly when the county sanitation plant on South Figueroa Street was constructed. But I do remember Rawn, and I remember knowing the chief operator down there--same as I was, the chief sewage plant operator who was working there. I think the White Point outfall sewer was completed after 1924. I think it was during my working with the city at Hyperion that they constructed it, because I remember them talking about the divers working on it. White Point is a place where it enters the ocean down in the harbor.

BASIAGO: But you heard nothing of this problem about the underground water supply being polluted by cesspools.

VAN NORMAN: No, I did not.

BASIAGO: That's still a controversial environmental problem.

VAN NORMAN: I can readily see, you see, we're invading a municipality, or area, outside the city of Los Angeles. The Hyperion outfall and all of its tributary lines, the whole sewage system, was in the city of Los Angeles. I really don't know where the county sewage was going prior to the construction of White Point outfall sewer. I can readily see where there was contamination from cesspools

that weren't connected to the sewer. In other words, there were still cesspools in the county, but I don't think there were any cesspools in 1924 within the city limits of Los Angeles.

BASIAGO: I also want to review some of the history of the 1930s through 1940 that we discussed in our last session. At that time, the plant was still pretty much a screening and chlorinating operation. Into the 1940s the plant was beginning to be deemed inadequate. In 1942, the [California] State Board of [Public] Health ordered a quarantine of ten miles of beaches from Hermosa Beach on the south to Venice Beach on the north of the plant. By 1944, the city of L.A. was given a court order to end the pollution of the beaches near shore waters. What was your response to all this? Were you glad that the quarantine had happened? You mentioned that you felt the construction of the seven-mile pipe in 1957 was a step backward.

VAN NORMAN: Well, of course, prior to 1950 there wasn't anything--no advancement that I can think of that occurred. The beach was quarantined, and I don't know when the quarantine was lifted. I can't recall that. Possibly, you have the date on that. But nothing really happened of any consequence from the date of the quarantine of the beach until 1950. Then that was all eliminated by the complete processing of the sewage flow.

BASIAGO: It was just a matter of keeping bathers out of the water?

VAN NORMAN: Yes. I don't know-- Do you know when the quarantine was lifted?

BASIAGO: I assume with the construction of the--

VAN NORMAN: It still was in effect until we started operation in 1950.

BASIAGO: I guess.

VAN NORMAN: Because there wouldn't be any reason to lift it because we were still-- We had beach patrol there. A man that was assigned to taking samples every day, to pick up the water at the breaker line, at the beach line, and take them into the laboratory and have it analyzed for E. coli content.

BASIAGO: Well, actually, the chain of events was that the State Board of Health ordered the quarantine in 1942. It went into effect in 1943. By '44, the city was given a court order to end the pollution. By 1949, the concern over the pollution of the beaches there in Southern California, in general, had reached the state level. So much, in fact, that by that year, 1949, the governor at the time, Earl Warren, signed a water-pollution-control bill into law. That bill ultimately resulted in the--

VAN NORMAN: There was no correction of the beach contamination from the date of the quarantine until we

started up the new plant. That's what it amounts to, because we were given warnings to do something about it, which the city did. They drew plans and built a treatment plant.

BASIAGO: Do you recall any of the furor? Were there any leading citizens who were a real burr in your saddle about the pollution problem? Were there any early environmental activists who would come down and give you an earful about the beach pollution?

VAN NORMAN: Oh, I had various complaints from the towns, namely, Hermosa [Beach], Manhattan [Beach], and Redondo [Beach]. Yes. They even brought the chief of police down there to impress me that if I didn't do something about it, something might happen to me. So, it was plain to be seen that I had no control over the disposition. I was operating what we had and doing the best we could with it, but there was no change. The only relief for it was a complete treatment of sewage, that is, primary settling and secondary settling and final settling (which settles up by plain subsidence, if you want to put it in my language). In that way, we moved the sludge and it was digested. It was dried, and Kellogg took it and used it, and then Wilbur Ellis processed it with the pellets and took it over. The quarantine, followed by the construction of the Hyperion Treatment Plant process, was the only relief. And that was

all the way from the date of the quarantine until 1950. There wasn't anything done that improved the situation.

BASIAGO: Do you recall when Metcalfe and Eddy, the Boston consulting firm, proposed activated sludge processing right after World War II? That's a process whereby air is pumped into the sewage to aid the bacteriological digestion.

VAN NORMAN: Metcalfe and Eddy rings a bell.

BASIAGO: Metcalfe and Eddy for years was a principal--

VAN NORMAN: Advisers to the city?

BASIAGO: Advisers particularly to the [Los Angeles City] Department of Water and Power [DWP] and some of its various projects.

VAN NORMAN: Yes. Their name is familiar to me, but I have no recollection of any direct contact with anybody in Metcalfe and Eddy. I think that was probably all done through the city engineer's office or the bureau of engineering [Los Angeles City Department of Public Works, Bureau of Engineering]. It didn't come down to my level, you might say.

BASIAGO: There were a number of eminent people in L.A. history who became involved in the sewage controversy in the forties, among them Franklin Thomas, a famous professor at Caltech [California Institute of Technology] who, along with Mr. Rawn of the county sanitation and a gentleman by the name of Colonel [Walter R.] Leeds, was appointed to a

[Los Angeles City] Board of [Public] Works [Commissioners] committee to look into the problem. Do you recall that triad at all?

VAN NORMAN: Not clearly, no. I knew Rawn personally, knew him real well. I can't honestly say that I know anything of value as to just what their mission was, what they were appointed to do and what was accomplished. I can't recall that, no.

BASIAGO: Apparently, Rawn was representing the county and Colonel Leeds the city and Franklin Thomas the academic community. They recommended a two-and-a-half- to three-mile outfall, rather than the five-thousand-foot one then in existence.

VAN NORMAN: What year was that?

BASIAGO: That was some time at the end of World War II. I assume 1948-49, when the--

VAN NORMAN: I can't clearly remember all of the outfall sewers that were built, but I think there were at least three outfalls. I think the original outfall was a mile. Then I understand that they built two more. I don't know when the last one was built. I'm sure it was after I left there in 1955.

BASIAGO: Did you ever receive a visit from Aldous Huxley, the famous writer? He was--

VAN NORMAN: Who?

BASIAGO: Aldous Huxley. He wrote an article about a visit to the beaches of Santa Monica when they were inundated with sewage from the Hyperion plant.

VAN NORMAN: I don't recall that.

BASIAGO: He wrote one of the most famous literary accounts of the grease and sewage accumulation at Santa Monica during the quarantine.

VAN NORMAN: Of course, there were continuous complaints and articles and investigations and everything. But the problem, the way I see it, was not solved starting with the quarantine on the beach, until the new plant was completed in 1950. Because there wasn't any change in the basics of the disposal at that time. It was impossible to do anything about it, with the exception of chlorinating the raw sewage. As I recall it, I think they built the chlorination plant in 1948, two years prior to the opening of the new plant. I can recall switching to chlorine, as Bill, I think, told you. Because when we made the switch, why, we had to switch from prechlorinating up the line to chlorinating after it went through the plant.

BASIAGO: Apparently, after this trio of leading citizens made its recommendation in the late forties, Norm [Norman B.] Hume of the Board of Public Works got involved. He recommended an even longer extension.

VAN NORMAN: I've got a fine picture of Norman Hume right

over there in my book.

BASIAGO: Was he a good friend?

VAN NORMAN: Oh, yes. I have the highest regard for Norman Hume. I think he's still alive. He's a fine fellow.

BASIAGO: Apparently, he recommended the extension be carried twice as far--of both pipes.

VAN NORMAN: Hume was on the payroll of the city of Los Angeles.

BASIAGO: Right. He was appointed by the Board of Public Works and came up with the proposal of--

VAN NORMAN: A longer outfall?

BASIAGO: A seven-mile sludge outfall and a five-and-a-half-mile primarily treated effluent outfall.

VAN NORMAN: Yes. You see that five-mile outfall was after my time, I think. What year was that that he recommended that? Do you know?

BASIAGO: I believe 1949-50. Right prior to the construction of the facility. Because the group that made the recommendation just prior to that to the Board of Works was recommending a two-and-a-half- to three-mile extension, or three times the length.

VAN NORMAN: I think that in all there were about three ocean outfalls built at various times, starting with the original one-mile, the north outfall sewer. You see, prior to that time they had the central outfall sewer line

bringing all the sewage down there to Hyperion. Then they constructed the north outfall sewer. I worked on it a year. Prior to the time that I was employed there I operated a dragline and a backfiller for the [Thomas] Haverty Company. Thomas Haverty had contracted a section of the laying of the north outfall sewer pipe through Culver City and Baldwin Hills. The sewer line runs roughly down Exposition Boulevard. It entered the Baldwin's ranch and ran there down along the toe of the hills to Playa Del Rey and it turns. It tunneled there. It tunneled through the hill there, and then it turns and goes right down Vista Del Mar into the sewage plant.

BASIAGO: Do you remember any of the politics of this choice between the three-mile extension and the seven-mile extension? I noticed, by examining the maps of the currents along the shoreline, that apparently the currents nearest the shore go north, but there's another current a little bit farther out that goes south. I guess you could say that with the seven-mile extension you're beginning to get into the area where the currents begin to go south. Do you remember any talk about which direction the sewage would be carried?

VAN NORMAN: No, I do not. Unless I just happened to be informed or read about it, why, that would be entirely out of my activity. That would be entirely up to city law.

BASIAGO: It looks like for at least ten miles out, the predominant currents--at least above Palos Verdes, maybe up to Point Dume--go north. There's a current that comes down along Ventura very close, about four to five miles from shore, that scrapes along Point Dume there that's coming south. It would seem that the outfall sewage is caught between two confluents of currents right here.

VAN NORMAN: Yes. I can see what you mean. The seven miles extended far enough to become involved in the southward movement from the north to south, rather than traveling north inshore. That's what you're stating more or less.

BASIAGO: I'm wondering whether you had ever heard if there was any problem, or battle, between real estate developers in Palos Verdes versus Malibu.

VAN NORMAN: No. I honestly never did hear of any. I'm not refuting it. I'm not saying it didn't exist, but I never did hear of any place that was really involved, other than shore communities south of Hyperion. That would be, in other words, the current that carried the effluent south. No, north it would be, wouldn't it? Yeah, that's right. But we got lots of complaints from all along the beach. Of course, Venice was a part of the city of Los Angeles, so we're speaking of municipalities outside the jurisdiction of the city of Los Angeles. This would be the

South Bay cities there. They were the main complainers.

BASIAGO: Because they felt, I guess, they weren't benefiting from the outfall at all. They were just suffering some of the consequences.

VAN NORMAN: Any time that we ever were forced to, due to heavy storm weather-- Where we couldn't properly screen some of the sewage, why, sometimes it became necessary to bypass, let's say, and dump raw sewage into the ocean without the benefit of screening. And then of course all of your large contaminants in there would show up on the beach.

BASIAGO: You were administrator of the facility from 1930 to 1940. What did you do at the plant after that, during the forties and into your retirement into the fifties?

VAN NORMAN: Well, from my appointment by standing civil service examinations, my title until 1950 was chief operator of the sewage treatment plant at Hyperion. Then when it was taken over and a new administrative setup came in, the chief engineer down at the plant, like Bill Garber was at one time-- And what's his name? Not Norman Hume. My memory's slipping right now. His sister [Pauline Betz] was a champion tennis player of the United States at one time. Jack Betz. Jack Betz was head man down there. Of course, that comes after 1950, but up to 1950 I had the title. Then I had to pass an examination for a senior

operator. My job as chief operator did not qualify me to automatically be transferred to that level in the new plant, so my whole future was on the line with the examination. I only stayed five more years, but my job was on the line. If I didn't qualify in the first three, I don't know what my status would have been. I would have probably been reduced to a sewage plant operator. But I passed and was one of the senior operators.

BASIAGO: Was it a difficult thing to keep pace with all these technological improvements? Were you constantly having to study to learn about the latest in sewage technology?

VAN NORMAN: Yes. I took numerous courses at USC [University of Southern California]. We used to have periodically short-term courses, and we would be given time off to go there. They were all tutored by sanitary engineers. I can't recall who the professors were at the time, but that's where we got-- A lot more technical knowledge was required as a senior operator than a chief operator of a screening plant. Because, you see, there's all of the chemistry and everything involved, whereas we had no chemistry problems there. We did have a laboratory there, and what was his name? He became the head of the [Los Angeles City Department of Public Works] Bureau of Sanitation. I can't recall his name right now, but he was

a chemist basically, and he used to come to Hyperion and operate the chemical lab there prior to the time that the new plant was opened. Of course, they had a full chemical lab then. They do now.

BASIAGO: I'm wondering what the everyday response was to the quarantine. Was the staff indignant? Was it anxious that the sewage was beginning to spark the ire of politicians?

VAN NORMAN: The reason for the quarantine, what brought about the quarantine?

BASIAGO: No, no. How the fellows at the plant thought about the quarantine. What kind of things were said? Did they think it was a big joke? Were they indignant that it was put in place? Were they glad? Sad?

VAN NORMAN: I suppose that our comment on it was that we thought it was disgraceful to be quarantined, that we were polluting the ocean to the extent that they had to safeguard the public by putting a quarantine on the bathing in those waters for that whole time. Of course, that is all brought about by the **E. coli** count in the surf. We ran a continuous daily patrol and sample taking and analyzed it in a laboratory for all those years that the beach was contaminated.

BASIAGO: Was that when biological testing by the Hyperion plant was inaugurated, under your tenure there?

VAN NORMAN: No. Well, the samples from the ocean were taken over to the [Los Angeles City Department of Public Works Commissoners] Bureau of Standards on Yale Street in Los Angeles. [John T.] Young, I think, was the head of it at that time. I don't know if he's long gone or he's retired. All of the samples went over there. We didn't have a complete laboratory at Hyperion.

BASIAGO: But when did it start? When did the Hyperion plant start to become interested in testing? Was it during the quarantine that it felt it had to?

VAN NORMAN: Oh, yes. I think that was probably a must. In addition to being quarantined, we had to maintain a daily sampling of the surf and have it analyzed in the laboratory over at Yale Street city lab.

BASIAGO: Do you remember any Los Angeles civic leaders who were particularly for or against the quarantine? For instance, now we might identify Tom [Thomas E.] Hayden as someone associated with the issue of toxic waste.

VAN NORMAN: I was trying to think of who was-- No, I don't recall anybody. Naturally, they defended themselves as we had, but I don't recall any really active opposition to the quarantine.

BASIAGO: Anybody vocally for it? Who led the quarantine? That's what I'm wondering. Who led the quarantine? Earl Warren didn't get into the picture until

1949. I'm wondering who was behind the quarantine. Usually, these kind of movements have leaders.

VAN NORMAN: The quarantine was brought on by the State Board of Health. That's who. A court order-- The judge came down there. I recall Harvey [A. Van Norman], my cousin, introduced me to him.

BASIAGO: What was the judge's name?

VAN NORMAN: I don't remember his name. Unfortunately I can't recall. They probably have it up there in the city hall in the files I would assume. He came down there and he invoked a quarantine, and I think the State Board of Health were the main ones to complain. They requested it, and the judge granted it.

BASIAGO: So it was the State Board of Health acting as an agency, rather than some individual. I thought there might have been a principal engineer.

VAN NORMAN: I don't remember. Although you stated earlier that there was a board consisting of-- What's his name?

BASIAGO: Rawn, A. M. Rawn.

VAN NORMAN: Thomas did you say?

BASIAGO: Franklin Thomas and Colonel Leeds.

VAN NORMAN: Colonel Leeds?

BASIAGO: Leeds. Do you recall him?

VAN NORMAN: No. I don't. Maybe he was from a private consultant.

BASIAGO: I suspect that. Rawn doesn't identify him. I think he might have been the representative of industry, with Franklin Thomas representing--

VAN NORMAN: I know A. M. Rawn well. I had lots of conversations with Rawn.

BASIAGO: What were his feelings about the situation? What was he presenting? What was his ideal solution to the whole pollution problem? Do you remember having discussions with him?

VAN NORMAN: Yeah, yeah. You asked me. In other words, I recall no indicative statement that he made as to his personal feelings about anything. Whatever his report was at the time would spell out his feelings, I would say. I'm not familiar with that. I never did read that.

BASIAGO: The reason I asked the question is because his oral history with UCLA's Oral History Program represents, or reflects, some feelings on his part that there were alternative water reclamation projects that could have been instituted during this period. He talks about various ways of purifying the water that were never put into effect. I was wondering--

VAN NORMAN: Well, my personal opinion of Rawn, and I'm going out on a limb to say that, and I'm not going to say it with any positive-- But I don't think that Rawn was particularly favorable to the powers that be in the city of

Los Angeles. I feel that Rawn was egotistical to the point that he thought that his knowledge of the situation and everything was more up-to-date, let's say. I don't think that he showed any particular mercy, so to say, for the people that were operating the place or [for] the city of Los Angeles. Because I feel that Rawn was a really ambitious man, and he had quite a reputation, and I think he felt it. I talked to the man quite a few times. I was trying to think of some of the people we used to have, but I don't recall them, that were-- I can't even recall the State Board of Health man that used to come there. What's he called? Bill Garber knows his name, but I can't think of his name. We had visits there from the State Board of Health from time to time.

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MARCH 17, 1986

BASIAGO: [A. M.] Rawn talks about a proposal to reclaim water that came out of the Los Angeles [City] Department of Water and Power [DWP]. The idea was presented by a gentleman by the name of Ray Goudey. A. M. Rawn recalls a tiny demonstration plant that Ray Goudey worked on for the LADWP for sewage reclamation that would involve percolation through sand. Do you recall that plant at all?

VAN NORMAN: I know Ray Goudey. I have his name on a piece of paper over there on my qualification as a plant operator--to qualify as a sewage plant operator. I will show it to you. I knew Ray Goudey personally. I can't help but say that Ray Goudey-- Well, the fact of the business is, he used to be the professor at a lot of those short courses that we took. Ray Goudey was the officiating professor. The only thing that I know of-- You were talking about percolating the sewage water. Okay, at one time, the Standard Oil Company [of California] in El Segundo sent an engineer over to Hyperion [Treatment Plant], and he went up on the sand hills. (This is going way back prior to 1950, way back.) And they proposed to build a settling and probably a sand filtration-- I don't know what the proposed method was, but they were going to use it for industrial water and pump it from the top of the

hill over to Standard Oil Company, which is over the hill in El Segundo. They sent a surveyor over there, and they picked out an area where the [Ezra F.] Scattergood [Steam] Plant is now, at the top of the sand hills. They were going to build a retaining reservoir up there and probably a sand filter to filter the water to make it-- Not for human consumption, but for industrial water. That was prior to the Colorado River water coming here. They get plenty of water now, and El Segundo uses, I think, all Colorado River water.

BASIAGO: Rawn had recalled that Mr. Goudey's idea didn't get a very good reception, but your comments would lend credence to the idea that it was actually implemented by the oil companies. Was this plan actually implemented? Was it a success?

VAN NORMAN: Standard Oil never did go through with it. It was abandoned.

BASIAGO: So it was just a demonstration plant, kind of a consulting project.

VAN NORMAN: Yes. They sent a surveyor over there, and they worked up to a certain point, and then, I would have to say, that it was found not acceptable, for some reason or other, and the Standard Oil Company didn't go through with it. That would have probably been their project of building the reservoir and all of that because-- I don't

know what the conditions of that were at the time.

BASIAGO: Do you think it was outmoded by the Colorado River Aqueduct? There was no longer any need for cheap industrial water?

VAN NORMAN: Well, you would have to say that the Standard Oil Company evidently found sources of water that supplied their need and dropped it, because, you see, the wells in El Segundo were going salt. The water level was pumped down to where there was intrusion of salt water in the water along the beach there. In fact, when I left in '55, there was a test hole over there where they periodically came and took a dipperful and ran a salt content study on it. They would bore a hole in the ground there, and right down by the final settling tanks there they had a sampling well. They were in dire need of water, and they considered reclaiming sewage water for industrial use in the Standard Oil Company to satisfy their water needs.

BASIAGO: Conversely, do you remember any opposition on the part of the Metropolitan Water District [of Southern California] to those sorts of water reclamation scenarios, in the sense that they soon were in the business of supplying Colorado River water?

VAN NORMAN: No, I don't.

BASIAGO: I was just wondering if there was any opposition on the part of the water suppliers to water reclamation

from sewage.

VAN NORMAN: At that time that they proposed it, other sources of water weren't available or going to be available in the near future, and then when it became apparent that the Metropolitan water would be sufficient to satisfy their needs, they gave it up.

BASIAGO: Let's talk about the relationship between sewage and energy production. The new Japanese proposal for Hyperion recommends a method of burning the sewage to produce electricity. The plant has always supplied methane gas to the Scattergood Steam Plant next door to it. When did that start? Did that start during your tenure? Taking the methane off of the digested sewage.

VAN NORMAN: In other words, you're asking me if Scattergood was in use before I retired in 1955. It's probably right on the front of the building there when it was built, but--

BASIAGO: Whose idea was that? Whose idea was that to get energy from digesting sewage? Not to get energy, but to get methane.

VAN NORMAN: Oh. Just a minute. They couldn't use oil, and they had a gas-- There is a gas line from the Standard Oil Company over to the Scattergood plant, and that's the fuel that they use. When we started making gas in the digestive system there, why, all we did was modify the use

of Standard Oil gas and supplement it with our own production off our digesters.

BASIAGO: So Standard Oil still supplies methane gas to the Scattergood Steam Plant?

VAN NORMAN: Well, I would say butane or methane, whichever it is. Yeah, they supply natural gas. I don't know what natural gas is--I guess it's methane. Butane, I think, is a derivative of oil. They extract butane from crude oil.

BASIAGO: I think propane as well.

VAN NORMAN: Propane as well, yeah.

BASIAGO: But methane is off of deteriorating biomass.

VAN NORMAN: Swamp gas.

BASIAGO: Do you remember who made that connection between Scattergood and the Hyperion facility? Was anybody behind that?

VAN NORMAN: Bill [William F. Garber] would know, but I don't know.

BASIAGO: You say there's a pipeline?

VAN NORMAN: A big pipeline runs right down the street that I just lived on in El Segundo on Loma Vista [Street]. And every time a bus goes down the hill I feel a slight earthquake there, because the pipeline shakes, and when the bus runs over it, it telegraphs along there and shakes the house. It runs right down Loma Vista Street there in El Segundo from Standard Oil over to Grand Avenue and then

turns and goes down over the hill into the Scattergood plant.

BASIAGO: There is a fairly prominent marine biologist and marine life specimen collector by the name of Rimmon Fay who has always been pitted against various people at Hyperion. He's always claimed that the sewage outfall into the ocean is responsible for various tumors on fish life and that it's--

VAN NORMAN: What's his name?

BASIAGO: Rimmon Fay. He claims that at the mouth of the outfall there has been a magnification of certain species of marine life and the diminishment of others.

VAN NORMAN: Yeah. Good for some, bad for others.

BASIAGO: And he claims that the sewage has virtually devastated the tuna industry in Santa Monica Bay. He remembers as a child, perhaps forty or fifty years ago, 350 tuna boats in Santa Monica Bay, and now he says there are none. I want to tap some of your recollections of marine life in and around the outfall and the Santa Monica Bay. Did you ever fish near Hyperion when you were working there from 1924 on?

VAN NORMAN: Did I ever fish?

BASIAGO: Yeah, were you a fisherman? Were you a recreational fisherman, or were any of the guys at the plant surf casters or anything?

VAN NORMAN: No. I'm just toying with a statement; I'm turning over in my mind whether I should mention it or not. There was an incident there, and it's a fact. There was an ordinance against fishing on the Hyperion pier. Big sign there: "No Fishing From This Pier." The [Los Angeles City] Board of Public Works [Commissioners] saw fit to issue a license for a man to operate a bait stand on that same pier. I can't elaborate on it, other than to just make that remark. I didn't fish, but lots of people fished off the old pier before they tore it down. I had troubles out there with the public fishing. A storm took about ninety feet out of that wooden pier before it was finally demolished, and they never did replace it. Some fellows went out there--enterprising young men--and took a couple of pulleys out there and rigged up a tram. They'd get on this line and work themselves out to the other ninety feet out there, and I finally got notice from somebody in city hall to discourage that. I went out there one day, and there was a guy on the other end on the other side of the rope. I told him to come and he said, "Why?" I said, "Well, it's against the law to fish out there, and I'll give you ten minutes to get over here. If you don't, I'm going to take my knife and cut the rope." I didn't have any trouble getting him back onto the side of the pier. But that was a fact, there was a permit issued to a man

that had a bait stand out there.

BASIAGO: Do you remember the tuna industry at all in the Santa Monica Bay? In 1924, when Hyperion was first built, were there a lot of boats out there fishing?

VAN NORMAN: There was a Japanese fishing village at the stop on the Pacific Electric railway. I think Hyperion in the dictionary means "sun god." But anyway, that's the origin of the name. But there was a Japanese fishing village that persisted until-- I don't think it was there when I came there in '24, but it had been-- I think the [California] State Board of [Public] Health stopped it. But they went out and commercially fished right off of the end of the outfall sewer. Caught the fish that were swimming in the sewage, you might say.

BASIAGO: I guess they felt that it was a very close source.

VAN NORMAN: Now, you see, they're practically discouraging the eating of any fish coming out of the bay down there right now. You've heard that. So, if they're being contaminated now with all of the treatment of the sludge and everything, why, it's a cinch that at that time they were not to be classified as edible food. There were a lot of fishing boats out there in the bay. There was a lot of commercial fishing going on in the whole Santa Monica Bay in those early days. Lots of fishing boats hauled the

public out of Redondo [Beach]. There were regular boats, fishing boats, and you could go down there and take a trip and fish in the bay.

BASIAGO: Do you think the marine life along the shore there has been diminished, or has it just been poisoned so that these things aren't edible? For instance, here's what Fay says about the shoreline. (He mentioned this to me in March of 1985. That was a year ago.) He says that [reading] "the productivity of the shoreline has declined by a factor of 20 to 50. Gone are the once numerous hardcockle and gaper clams, the brachiopods, the pecten diegansus. Pismo clams are rare. The rockfishes of California have been fished out and never recruited back, the recruitment inhibited by poor water quality. Gone are the tuna which made for a thriving fishing industry." Do you think that's a fair statement, or is he overstating the situation a little bit?

VAN NORMAN: I really should not make a comment on that because I'm not really qualified to answer. I would say that it's an overstatement to a certain extent. I don't think that it's that severe, because there's still people and activity and there's still fishing down there and there isn't a whole bunch of them dying as a result of it. They tell you it's bad for you and everything. I don't know what the records would show. Do they have any positive

cases of where the eating of that fish that you catch in the bay right here has caused serious illness or death? I don't know that.

BASIAGO: As far as I know, there has never been an incident like at Minemata in Japan, where they had the paralysis and birth defects.

VAN NORMAN: The what?

BASIAGO: They had the gross teratogenic effects. The offspring of people who had eaten tuna with mercury in it. In Minemata in Japan. The famous Minemata disease. As far as I know, there haven't been any cases like that in Los Angeles.

VAN NORMAN: Of course, that big argument-- Speaking just as a layman, you might say mercury has been in fish since time immemorial. I don't think that the human contamination of the ocean out there has intensified the amount of mercury found in fish. That's my personal opinion. From all that I've read about it, fish have had mercury in them before men put mercury out there.

BASIAGO: Did you know Rimmon Fay's father, who was also an activist and made similar claims that the Hyperion plant--?

VAN NORMAN: Who?

BASIAGO: Rimmon Fay's father was also a leading marine biologist who was claiming that the Hyperion plant was devastating the marine life along the Santa Monica Bay

area.

VAN NORMAN: I don't know anything about that.

BASIAGO: During our last meeting, you mentioned Wild Bill Mallanger, for whom you worked at the Raymer plant [Camp Raymer] there out in the San Fernando Valley, where the Owens Valley water was impounded. You mentioned that Wild Bill was in a car crack-up near Chalk Hill. Did that get its name because of a deposit of diatomaceous earth there? Do you remember any of the diatomaceous earth or fuller's earth developments in the basin?

VAN NORMAN: I would say, when you speak of diatomaceous earth, where we dug up these shells could well be, because it was like the unprocessed diatomaceous earth that you buy in a sack to use as a filter media. That earth there was indicative of that--where these shells were. So, I suppose that in any deposit that you find, whether it be out on Chalk Hill, like we did near the surface, or down deep in the earth where shells are, it would be that that was the ocean at one time. It's just been the upheavals and the process of earthquakes and everything like that, that these different things occur that I experienced.

BASIAGO: What about the shells that you found at two thousand feet at Signal Hill? Was there any talk that people thought this might have been proof of the biblical account of the flood or anything? That's a half a mile

under the ground.

VAN NORMAN: I would say that the geologists would tell you that that was ocean bottom at one time. In another finding down at Hyperion later in the excavation for the new plant that was built in 1950, the contractor dug up the rib bone of a whale.

BASIAGO: Where was this?

VAN NORMAN: At Hyperion. Down at about below sea level. They were digging just about sea level. They uncovered this rib bone of a whale. How do I know? Because I called for the curator to come out from the museum in Exposition Park [then, Los Angeles County Museum of History, Science, and Art], and he was a Russian by birth. His name was Konikov. Mr. Konikov told me that this was the [imitating a Russian accent] "Riv vone of a vale. I would tell you how old he is, but the vib vone of the vale has not changed in thousands of years. Iv it was his jawbone or something, I could tell you how old he is." Yeah, he said it was the rib bone of a whale. Hyperion Hill was 165 feet high, and we reduced it down to sea level, so this was down to about 165 feet of clay that was in a clay formation that we ran into at their works as it settled down. That was evidently the bottom of the ocean.

BASIAGO: The word **ballona**, from Ballona wetlands, which is just inland from Hyperion here in Playa del Rey--

VAN NORMAN: It was just a thousand feet from the shore roughly.

BASIAGO: **Ballona** means "whale," doesn't it, in Spanish? Doesn't that come from it?

VAN NORMAN: That's true. I didn't know that until I encountered it, and I just learned that recently. Why was Ballona Creek--? Why was it named that? At one time the Los Angeles River ran out of Ballona Creek, history tells us.

BASIAGO: Before the flood changed it.

VAN NORMAN: Before it changed and made a new channel to the ocean by way of the harbor. All right. I would assume that some whale at one time made a left-hand turn, same as it did here recently, and caused the Spanish to name it Ballona Creek. Where would you get a whale up Ballona Creek from?

BASIAGO: Why would it be "whale creek"? Probably because a whale swam up it.

VAN NORMAN: I would say that, yes. At that same place, we dug up the remains--as I told you before--of two people standing up. We assumed that quicksand got them and they went and sunk and were drowned, and their remains just stayed there until we dug for this-- That's when I was working for [Thomas] Haverty [Company] when we were putting in the north outfall sewer.

BASIAGO: Suggesting that there were a few thousand years of human habitation there in all that time. You found a whale rib.

VAN NORMAN: Mr. Hess was a superintendent for the Haverty Company, and he was a buff, a geologist, or whatever you want to call it. It interested him. We were kicking that head around there for two or three days like a football. We thought-- Us plebs thought nothing of it, and we put it back in the ditch and covered it up. He came back, said, "Do you know where you buried it?" "Yeah." He had us dig a hole, dig it up. He took it and sent it back East to the institute of the American Indian, I think he said, in either Washington, D.C., or someplace or other. He was that much of a geologist, I guess you could call him. I had some other thoughts about the oil well and Chalk Hill and the finding of those bodies over there. That's about all of the things that I know of any finding. This Konikov told me that you can go down to Irvine and almost stick a shovel in the ground anyplace and find fossils of bygone days. That whole area down around Santa Ana there, where the Irvine Ranch is, is just rich with prehistoric fossils.

BASIAGO: I was wondering. The two thousand feet down near--

VAN NORMAN: At two thousand feet down, yes.

BASIAGO: At two thousand feet at Signal Hill sounds much further down, much farther down than a few feet out in the San Fernando Valley. That seems to suggest eons of sedimentations rather than just--

VAN NORMAN: Oh, hell yes. The earth has done this; it's turned over. That is evidenced by, well, over in Utah the dinosaurs were there, I think. I never did get to see it--I wish I had--but there's one over there cut out in a mountain. There's a skeleton of a full dinosaur there. They uncovered it up to a point. I think it's over there in, what do they call that park? Zion [National Park], or whatever it is there. It's in the Salt Lake area in Utah there.

And drilling an oil well: I'll explain the method now used. They call it a rotary. I worked on both. The old conventional, where you hammered a hole in the ground, and a rotary is nothing but the same as an extension of a carpenter's auger. The auger makes chips and it comes out, and you pull it out and clean the auger and go back in. In an oil well, all of those tailings of the drillings are circulated from the bottom of the hole up to the top by the use of a certain consistency of drilling mud. It floats sand, rocks, anything you can think of. [It] is thick enough and with enough force to float those things up, and they come out into a ditch and settle out and then you run

the mud back again. You run into-- For instance, the pump started to-- At this particular time I was an attendant, one of five men in a crew. It was my job--derrick man was my job--to go up in the derrick, and also I had charge of the pumps. There were two of them there, so if one fouled up you could switch over and clean a screen in there. And that's what happened. This pump started jerking, wasn't steady pumping, and I opened it up, and here was this screen and there were all of these perfectly brand-new clamshells, or oyster shells. From two thousand feet deep. So that had to be an ocean bottom at one time. Same thing as that dinosaur up there that's embedded in that hill there in Zion Park, or whatever it is. And, well, there is another one. Here about ten, fifteen, twenty years ago, something like that, they uncovered in a glacier in Alaska a big prehistoric-- What do they call them?

BASIAGO: Mammoth?

VAN NORMAN: Yeah, it was frozen, and he was in perfect shape! The flesh was still good until it hit the air. It's been in there for what? Maybe a thousand years flowing down that slow flow of that glacier.

BASIAGO: Did you come upon any Indian ruins in all of these sewage and oil operations?

VAN NORMAN: The only experience I have with Indian remains is on the island of Catalina. A man named Glidden there--

I wrote that down as a note there. I went to Catalina and was there for a short while in business with a fellow who owned an ice business. And there was a man there who went up to the isthmus, and he dug up and found an Indian graveyard up at the isthmus. He dug all those up, meticulously spooned them away. The Indians were all buried like this, sitting up with their hands around their legs and their legs drawn up. He told me all of them were sitting up. He spooned all the earth away, but a pedestal holding that up, and then took photographs of it. Then he took every Indian's remains and numbered every bone, dissembled the whole body, and put them in a box and shipped them back East to the museum of the American Indian.

And right downtown-- You been down there to Avalon? Right downtown at the corner where you get off the boat, they dug up a mortar and pestle that the Indians used to grind their corn in. It was right there down about six or seven feet below the street level, and they dug that out right in the town of Avalon. Indians occupied Catalina long before the white man ever came here.

BASIAGO: I think they were buried in an upright position like that, or fetal position, because they were entombed in baskets. I seem to remember that. And then the basket would deteriorate, some kind of--

VAN NORMAN: Oh, yeah, their casket was a basket, and they just lowered them into a hole and covered them up. And like you say the basket would deteriorate and the Indian remains would still be there.

In regards to Halley's comet: In 1910 I lived on Zamora Avenue, which is two blocks east of Central Avenue out in the Vernon area. And that was the year of Halley's comet. I was sixteen years old--I was born in 1894 and this was 1910--and I was old enough to appreciate and enjoy the view of it. As I recall it-- And I do feel sorry for the people this time it's come around that it isn't as brilliant and as apparent as it was then, because all you had to do was walk out in the yard in the evening and view it. It was in the southeastern sky, just about the same as it's appearing here now. Only that time it came in between the sun and the earth, and this time it went behind the sun. So that's why it's not as visible. And I saw Halley's comet night after night, and it's vivid in my mind. I can close my eyes and look at it and really feel that I'm seeing it again. I one time remarked in relating to a friend of mine, I said, "I bet it's got a tail a thousand miles long on it." I find out now after seventy-six years, in reading about it again, I find that it's about ten million miles long, instead of a thousand miles long. That tail extends way out! And studying Halley's

comet and being interested in it [and] finding out that I was going to live until now, which I did, [I wanted] to see it again. I'm attempting to get transportation in the California historical tours flight that's taking people up looking at it. They had a beautiful demonstration of it last night on channel 2, of the very line, Alaska Airlines, the one they advertise at the international airport. And my granddaughter and I and her husband are trying to take a trip on this airline that they showed last night on channel 2. And there will be a trip up into the sky-- There are two scheduled leaving times. We prefer to get the one that leaves at eleven p.m. if we can, instead of about one a.m. And they fly out over the Pacific Ocean, and I think they head south. And it's set at ninety degrees, which would be-- If they are flying south, that would be due east. Then you would be given about fifteen minutes viewing time of the comet, and these people all claimed last night that they saw it good. So I'm looking forward-- If we can secure bookage on it, why, we're going to take it. I hope to see it again and say-- I'm only taking the trip for, naturally, the thrill of it. I'm not a buff or what they call a jet-setter, or anything like that. I've flown very few times in an airplane, but I don't think it would bother me, and I'm willing to take that chance to fly up there and see it. And we're going to try to go around

April 13 to see it on this tour.

BASIAGO: Some of the things you recall from your childhood and young adulthood seemed to be pretty magical. You saw the first air show and remember seeing Halley's comet and various colorful figures from the American West. Do you think this country has lost some of its innocence, or its sense of magic like that?

VAN NORMAN: Has the country lost its what--?

BASIAGO: Well, its innocence or its sense of--

VAN NORMAN: Oh. Well, that's hard for me to say. Of course, when you look back over practices and things like that-- The automobile was a little bit ahead of me. When I came to Los Angeles and saw a streetcar for the first time, I couldn't figure out how a trolley could run on a wire without knocking the trolley off. My brother explained to me how a trolley car operated. You have all seen electric cars--well, there's a pole that extends up, a spring-loaded pole, and there's a wheel up there. But at each place when it comes to the crosswire that holds it, there's a clamp, and it's thin enough so that it will fit down in the groove of that pulley, and that's how that pulley stays on there. That's what I couldn't figure out when I was a kid, and my brother was relating to me. In Santa Ana they had no cars and automobiles.

BASIAGO: What do you think is most positive and

encouraging about the direction things have gone since you were young? And what's the most negative, or bad trend, that you see?

VAN NORMAN: Well, of course, I can't help but be aware of all of the fine things that we have. Like electricity and telephones and all those things that have advanced since I was born, and the automobile. When I was a kid I saw a three-wheeler like a tricycle--it was an automobile, was one of the first ones. I don't know if it was Oldsmobile who put it out. "Come away with me, Lucille, in my merry Oldsmobile" is as old as I am. So the Oldsmobile has been here a long time. Of course, that song goes way back to the early 1900s. All of the improvements you had. Oh, just for one thing to mention. I can well recall when I was riding along with a crew going out to Whittier to put up a big beam in a theater that holds the balcony up and a fellow pointed over there and said, "You know something. Pretty soon you're going to be eating peas and corn and all your vegetables all frozen." Well, that was when they were building a freezer plant, Birdseye, and by the way, Birdseye was the guy's name at the--

BASIAGO: Clarence Birdseye?

VAN NORMAN: Yeah. And we were crossing out here near Downey, and they were building this plant. And that was, as I recall, the first frozen food-- Well, it wasn't yet.

They were building a plant to process and freeze all of it. I saw them right out here on Culver Boulevard when I went to work at Hyperion in 1924. I saw them harvesting lima beans right out there a little bit west of Culver City in an open field, and they were hulling them and freezing them and packing them right out there in the truck, driving right through the lima bean field. All those things, those improvements in our way of life, canned foods and things like that, have contributed. You can go to the market and pick out any vegetable, or anything that you want. As far as I'm concerned, peas and lima beans, they're just as good frozen as they are fresh. We used to hull our own lima beans for years until the frozen ones came along. Many, many things. Well, when I moved to Los Angeles in 1902, we had gas lights in the house, and you had to take a torch and turn it on and light it with a little gas mantle up there. And we graduated to electricity, and all that was taken care of. For years we didn't have an electric refrigerator. When I went to Catalina Island that time in 1919, I don't think there was a refrigerator on the island. They had no water over there to make ice with, so they had to haul all the ice in from the harbor on a daily steamer.

BASIAGO: You have mentioned your stay there for a short time on Catalina Island several times now. What were you

doing over there? How did your stay at Catalina start?

VAN NORMAN: I went to Catalina Island in 1919. [William] Wrigley [Jr.] bought Catalina Island from the Banning family; for one million dollars he bought 51 percent of Catalina Island. He did something in Catalina that had never been done before. You couldn't own property in Catalina, all you could do was lease it. He opened up the whole place to bring people over there to his benefit to visit there and spend money, so he built eighty houses over there for occupancy--two-bedroom houses. There was a big rock called Sugarloaf. It was where the now famous casino is. Prior to his building of the casino, which either happened in '19 or '20, because I went back in 1920 again and managed an ice business with a friend of mine over there-- And he built a casino, and it was awarded the finest structure in the United States for that year. Well, that's simple because that was the depression along in there and everything was tough, and that was probably the only fine building built in the United States. But he did spend over a million dollars building the casino, which is still there and has enjoyed many famous bands that played over there.

BASIAGO: Why were you there? That was for one summer you were on Catalina?

VAN NORMAN: I was there two summers. The one summer I

went there and took charge of a labor gang supplying all of the lumber and the parts necessary to build the eighty houses for Wrigley. Next year I came back and Wilbur White, who owned a transfer and ice business, talked me into coming over and taking over the ice business for the summer in 1920, which I did. That's when, I think, Glidden went up to the isthmus there and discovered the Indian graveyard and shipped the remains back to the American institute of the Indian. You might say I changed places several times. I would say it amounts to the old saying, what do they call it, "jack-of-all-trades and master of none," because I jumped from one thing to another. But I do feel that I earned my way and respect in this way, and I became an important cog in whatever it was. In drilling, in ironworking, and in the sewage plant I got up to a respectable position of authority there. So I don't feel as though I entirely wasted my life.

BASIAGO: Catalina must have been a pretty colorful island at that time.

VAN NORMAN: At this time, now, I'm not positive-- I'm positive about 1919, but not a couple of events there, whether Wrigley built the casino in 1919 or when I came back in 1920. But I was there in 1919, which I recall vividly. I was there when the United States went dry. There was one saloon in town, and you couldn't get within

fifty feet of the bar, brother, I'm telling you. If you wanted to drink you had to pass some money like you do for peanuts at the ball game, and they'd pass it back to you. And that's when the United States went dry, and of course the country stayed dry. I worked for the Wrigley people that summer, and then the next year I came back and took over the ice business from Wilbur White. He later became mayor of Catalina Island. I well remember Catalina Island. There was an old judge living next door to me there. He was a very-- Well, it was really a one-horse town. There were only two or three automobiles or half a dozen automobiles in town, because there was no place to drive a car in Catalina at that time. It's only a square mile. The township of Avalon is a square mile, and prior to that you were off limits if you went anyplace outside of that square-mile limitation. The rest of it was all-- You had to get permission to go further out of the square mile.

BASIAGO: Were there goats on it at that time?

VAN NORMAN: You know, Catalina Island, in my humble opinion-- By the way, in 1915 there was a big hotel, the Hotel Metropole, but it burned in 1915. Then when Wrigley took it over, he built the Saint Catherine Hotel, which is still over there in the next cove out of Avalon Bay. And old Judge Wendell was his name, the old judge. I had a lot of fun with him when I had the ice business in 1920. He

had a stand-- He's the judge of the town, mind you. And my brother and some other guys were driving a bus over there. They were over there and running without lights at night and got a ticket for it. Are you about up?

BASIAGO: Yeah, let's start on the other side.

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VAN NORMAN: In reference to the ticket for the driving without lights, they had to appear in court. Well, one of these boys was working and he didn't want to lose his pay, so he went down to the cigar stand that the old judge owned right on the pier. And he was there, and he went right up to him and said, "Your Honor, I'm sorry I wasn't at court today, but I want to come to pay my fine because I was working and I didn't want to lose my pay. I hope you will excuse me." He says, "What will it be?" Judge Wendell says to him, "Two dollars." And he handed him the two dollars, and he rang it up on the cash register. [laughter] Of course we couldn't open our mouth because he was the judge, and we just had a laugh amongst ourselves. But we thought that was something to hang on the judge.

Another incident I had there with him, he got real tough about and tried to dress me down. Ice came from the Union Ice Company in San Pedro and was shipped over at that time daily in 300-pound cakes. He took ice for his soda pop and so forth, and I delivered it. His wife was in charge. She says to me, "Give me half a cake of ice." And I put it in the icebox and came back, and she said, "Give me a receipt for 150 pounds of ice." I said, "Hold everything. This half a cake of ice weighed 150 pounds

when it left San Pedro, but now, for me to give you a receipt for 150 pounds of ice, I'm not guaranteeing that. I'm just giving you a receipt for a half a cake of ice for the going price of half a cake of ice."

Well, that wasn't satisfactory, so that evening the old judge dressed me down. He caught me out there and he told me, "Young fellow, you think you're pretty smart." I said, "Well, I'm smart enough to keep out of jail, I hope." I said, "Your wife asked me to give her a receipt for 150 pounds of ice. I don't guarantee 150 pounds of ice, Your Honor. When I bring that to you, you take it as is." "Well, all right, we'll see about that." But that was the end of it. But no, if I'd put that down--bingo.

BASIAGO: Did you meet Mr. Wrigley when you were out there?

VAN NORMAN: I never did see Wrigley in person. He had an island manager, an Irishman, Fitzpatrick, and he had a contractor that built the houses who was from Pasadena, and he had done some work for the Wrigley over there--Brenton was his name. D. M. Brenton. I remember that. And he was in charge of the building of the houses, because he had done such a nice job in the Wrigley home in Pasadena that Mrs. Wrigley talked Mr. Wrigley into hiring him as the general contractor. And he did all the construction work there.

BASIAGO: During the time when you were running that ice

business, did you meet any of the famous celebrities who used to summer out there?

VAN NORMAN: Well, no, on the beach I saw movie celebrities there. There was-- What was his name now?. There were two brothers there. No. Outside of Zane Grey, Mrs. Zane Grey--I was trying to think of this fellow's name, a little fellow who was a famous actor. I met him there. Then also I saw Lottie Pickford on the beach there a couple of times--that's the sister of Mary Pickford. Other than that I don't know of any other celebrities. Oh, I met a fellow named Hand--he was a millionaire from Pasadena--but other than that I can't recall any other people that I met face-to-face. [tape recorder off]

I stood examination from a chief sewage plant operator to a senior operator, which was required because under promotional laws of the city there wasn't a justification to move me from this position to that one, because this position required more skill, let's say, more education than the other. And I passed the examination for that and was appointed as one of the three senior operators in the plant. And of course, the plant at that time grew from an average of about 25 employees in the old screening plant to 250 personnel in the new plant, so that required a head man of the plant (chief engineer of the sewage plant) and an assistant. Bill Garber was, I think, in charge of that,

and another fellow, Jack Betz. But I stayed until 1955 and retired November 1, 1955.

BASIAGO: During your entire career you saw the Hyperion facility struggle with various crises to process the sewage of Los Angeles. How do you view what's happening now, in light of the history of the facility? Now in 1986 they're planning to keep the sewage on land and burn it for electricity. How do you view that in terms of the history of the facility?

VAN NORMAN: Okay. They have arrived at a stalemate. There is no place to go that I know of right now, and I'm not a sanitary engineer. It's either the ocean or the land for the final disposal of the solids. There is no foreseeable method that I can think of that would completely solve the problem. You have the final solution of the disposal of the sludge, and what are you going to do with it? Are you going to dump it in the ocean and stand the environmental impact? Or are you going to burn it and go right back to what we moved from when we moved to the ocean (we moved due to the contamination of the atmosphere)? And there will be fallout from your smokestack emissions if you burn it--which they're going to do. They're going to burn it to heat water or whatever it takes to create steam and thereby operate steam-run electrical generators. That's in the present method, as I

understand it, now. They are going to utilize this sludge and turn it into energy, in the form of electrical energy, by the operation of steam-operated generators. So there's opposition from both sides, and I would say it's somewhat of a stalemate. Neither one of them has overwhelming power, except whoever mandated that they bring it back on shore and incinerate it.

BASIAGO: There was recently a change of personnel over there. Is there a history at the facility of people being fired whenever technology doesn't exist to handle the amount of sewage coming through there?

VAN NORMAN: This so-called transfer of the hierarchy at Hyperion is unprecedented in Hyperion history. I can't draw a parallel because there was none. Nobody was ever fired out of Hyperion of a consequential position that I remember. What happened to them all, they used Hyperion as a stepping-stone by examination--Bill Garber is an example. All of the other fellows that went up there-- I got a good friend out here and can't recall his name-- [Robert D.] Bargmen. Bargmen is a former head man at Hyperion. As you know, Bill Garber is a former head man. He graduated from Hyperion. There was another fellow there who--

BASIAGO: Jack Betz?

VAN NORMAN: Jack Betz is a former superintendent at

Hyperion, chief engineer of Hyperion. They all graduated by examination and went uptown and were selected for manager of the [Los Angeles City Department of Public Works] Bureau of Sanitation.

BASIAGO: Well, here in 1985-86 we see that there was somewhat of a transfer of power when it became clear that the facility couldn't meet the Clean Water Act, the Environmental Protection Act of 1972.

VAN NORMAN: All right, what was that transfer of power?

BASIAGO: Well, what I'm saying is that a few heads rolled when the facility didn't meet the 1985 limit there for the plant operating.

VAN NORMAN: There was a change in command there, or heads rolled, any way you want to express it.

BASIAGO: Right. In 1985 after the facility missed its deadline for meeting the standards that the EPA [Environmental Protection Agency] had set.

VAN NORMAN: Oh yeah! I know. You were talking about this recently where O'Hara--

BASIAGO: Yeah. But you say that's unprecedented. Why do you think it happened this time? Do you have any ideas?

VAN NORMAN: That's just speculative, because you don't know. You might have an idea or indication. I would say that the city was trying to get back some loss. What do you call it?

BASIAGO: Revenue?

VAN NORMAN: Credit that they had, or something like that. They were trying to appease somebody to get back into good graces again, that's all I can say. Whether it's the cockeyed--pardon the expression--but whether it's the environmental board or whoever, I imagine they would be the target because they're the ones demanding that the place be cleaned up. And when you ask how are we going to do that, I was told by-- I won't mention who. He was told that "That's your job, not ours."

BASIAGO: Well, here we are in 1986. There are two choices: the sewage can be dumped in the ocean and create some water pollution or it can be burned on land, creating some air pollution. I guess a third alternative is it can be placed in landfill, creating some--

VAN NORMAN: You have two ways to go only.

BASIAGO: Okay. Do you feel that the EPA placed some impossible demands on the Hyperion facility in 1972, given the fact that the technology doesn't seem to exist?

VAN NORMAN: Well, in my humble opinion, if you were given an order to do something by an authority who has the power to demand that you carry out this mandate, and you say, "How are we going to do that?" and he tells you that that's your problem, well, that's the answer to it there. They're making a demand that they won't have any part of it to

fulfill, but you--as an object of their concern or their command--are told to carry out something they can't even answer. How in the hell can you supply an answer to a situation like that? Unless somebody comes up with something brand-new at this moment, in my limited knowledge, there is no other solution. It's either land or water. And it's just a question of what some authoritative body, like the environmental body, says--go land or go water. Now, I ask you, has it been determined at this time whether the final solution is going to be definitely land? Well, already they've already said yes, it is. They've already committed themselves--it's land. They've already spent-- The United States government has paid $163 million, or something, to update Hyperion. So the die is cast. If they're going to get any benefits out of all the money that's been spent in the last years of construction of this new addition over there now, well, that would just be wasted unless it is satisfactory. And to tell you the truth, I don't see how anybody can impose the impossible upon an engineer or a group of engineers or a governmental agency like the city of Los Angeles engineering department [Los Angeles City Department of Public Works, Bureau of Engineering]. I can't understand that. There isn't a chance in the world of this Japanese acquisition-- In my humble way of thinking, there is no way of that being

satisfactory, because it is going to still emit contamination in the sky. There's going to be fallout. You can't destroy everything. Burning it up doesn't destroy it, it just leaves residual that goes off in particulate matter. I can't see it. Because, leaving me as a nonprofessional out of it, no professional--including the likes of Mr. Rawn--can furnish-- What is it Hitler said? "The ultimate solution," wasn't it, the word he used?

BASIAGO: "Final solution."

VAN NORMAN: "Final solution."

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